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Great Slave Lake Railway.

Hearings. v. 22-25, 1959-60

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ROYAL COMMISSION
ON
GREAT SLAVE LAKE RAILWAY

HEARINGS

HELD AT

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ROYAL COMMISSION ON
THE GREAT SLAVE LAKE RAILWAY

Hearings of the Royal Commission
on the Great Slave Lake Railway
held at the Court House, Edmonton,
Alberta, at 1.40 p.m., October
28 1959.

PRESENT:

MR. M. E. MANNING	Chairman
DR. WALTER D. GAINER	Member
MR. JOHN ANDERSON-THOMSON	Member

MR. FRANCIS M. FEEHAN	Counsel
MR. A. PATERSON	Secretary



THE CHAIRMAN: Mr. Bishop and Mr. Fouks, we have been considering privately the possibility of shortening some of our proceedings. Now, I understand you may have an application to make, Mr. Bishop.

MR. BISHOP: Mr. Chairman, as I pointed out, the table of comparative values which we submitted before adjournment last week, it now appears, is bound to lead to very extensive questioning, both by the Commission and by the Counsel for the Province of British Columbia, and no doubt extensive explanation by ourselves to answer the questions and to support the various figures, and with a view to shortening, if possible, the proceedings of this Commission, we would like to make application, and we make application, to withdraw this particular submission with a view to submitting, instead, a written argument which will cover the same material but which will explain all the reasons to the greatest extent possible, for the various assumptions made in arriving at these figures and also, to the greatest extent possible, the way in which the figures themselves were actually worked out. We feel that in this way we will answer, before and after, a very large proportion of the questions which are bound to be asked and bound to occur to the Commission and to Counsel for British Columbia due to the format of the present submission which, in effect, gives the answers we have arrived at without giving the assumptions we have made or the working of the figures



themselves. So for that reason we would like to withdraw at the present time this particular submission.

THE CHAIRMAN: Have you anything to say, Mr. Fouks?

MR. FOUKS: Yes, Mr. Chairman. British Columbia's position in this respect would be that we would have no objection to this being withdrawn providing it was completely withdrawn from the record. If, however, the result of this withdrawal resulted in the Edmonton and Calgary Chambers of Commerce presenting another written brief which would require cross-examination or questions by either the Commission or anybody, or if it was allowed, then we would object to this being withdrawn, because it would only mean a postponement of the present presentation by them. In other words, putting it off for a week or two and asking British Columbia to come back again, or anybody else, is of no assistance to us, and if it was just a written argument in rebuttal form and no examination or cross-examination, then we would have no objection to it being withdrawn, subject, of course, to my first few comments.

THE CHAIRMAN: Has anybody else anything to add to that said by Mr. Bishop and Mr. Fouks?

MR. BISHOP: I think, Mr. Chairman, we would be quite agreeable to submitting the written argument in rebuttal form and, particularly in the light of the discussions we have had, it would seem



that if material of this sort is to be withdrawn it should be in one form or another resubmitted so that all facts, what we feel to be facts, which may have at any time been available to the Commission should eventually end up in the Commission's hands. But we are quite happy to have it in the form of a written rebuttal.

COMMISSIONER GAINER: Mr. Chairman, I have a question to ask. Mr. Fouks, having in mind what Mr. Bishop has said about the possibility of presenting a written argument which would involve much of the material which has been already submitted, would it seem to you that this would likely take the form of a rebuttal or the presentation of something that isn't a rebuttal?

MR. FOUKS: That is why I premised it on the basis that it would be in the form of rebuttal. If it was new evidence which would require examination or cross-examination, then we wouldn't allow it to be withdrawn.

COMMISSIONER GAINER: A written argument which in any way refers to the figures which have already been submitted in exhibit 52 (ooo) - this would not qualify, in your submission, rebuttal but new material.

MR. FOUKS: It is rebuttal.

COMMISSIONER GAINER: Or argument and assumptions on which these figures have been based.



MR. FOUKS: Argument is argument; I have no objection to it.

COMMISSIONER GAINER: Mr. Bishop, is it to be a rebuttal of information already submitted or is it likely to involve explanation of this particular exhibit?

MR. BISHOP: I think, Mr. Gainer, we could correctly say that we could cover everything referred to in exhibit 52 (ooo) in order that nothing might be removed from the inspection of the Commission; but not taking into account exhibit 52 (ooo), we would still undertake to relate everything in our written argument to material already on the written record, which I submit would qualify it for the term rebuttal. In other words, we would relate it to material placed on the record but not counting exhibit 52 (ooo).

COMMISSIONER GAINER: You would expect it wouldn't involve any of the conclusions, any numerical conclusions, you have come to in the exhibit 52 (ooo).

MR. BISHOP: It might, I think undoubtedly, would bring forth certain numbers, numerical conclusions, if you like.

COMMISSIONER GAINER: The reason I ask is that I think it is fairly important now to find out if this presentation later is not going to qualify in Mr. Fouks' estimation as rebuttal evidence.

MR. BISHOP: I think Mr. Fouks said that he did not object to additional figures in connection with matters which had already been put into the



record.

MR. FOUKS: I have no objection to anything that is already on the record. For instance, Point Brule - I have not been able to see any mention of that in the record. As long as it is on the record some place, I have no objection at all.

MR. BISHOP: We would be prepared to relate everything we submit to the actual wording of the record. In this particular example, Point Brule would be the available harbour at Embarrass Airport. It was discussed earlier, but I guess not under the name of Point Brule.

MR. FOUKS: What was it referred to before?

MR. BISHOP: Embarrass Airport.

THE CHAIRMAN: We would like to adjourn and discuss this amongst ourselves.



THE CHAIRMAN: Mr. Bishop, I am sorry, but we feel we cannot accede to your request. We feel that the document is on the file. It was filed as a document that contained relevant information and statements, and having been placed on the file we do not feel it should be taken off. There is no doubt that Mr. Grimble will explain any statements in there, as he has done with regard to all other material he has been good enough to submit to us.

MR. BISHOP: That is right, my lord.

THE CHAIRMAN: We are anxious to get along with the proceedings, as we have already discussed in private, as quickly as possible, and it did seem to us that we might save some time by omitting having everything read from the sheets as we go through them one by one, because I think everybody who is interested in them has seen a copy of them. Would that be of some assistance to you?

MR. BISHOP: I think so, sir. Possibly, Mr. Grimble could start right away with the first page, and ---

THE CHAIRMAN: Yes, take the first page and assume it has been read, and we will see if there are any questions that arise in connection with it. We will get along with it in that manner as well as we can. Is there anybody who has any objection to that method of proceeding?

MR. FOUKS: I have no objection.



THE CHAIRMAN: I think, Mr. Fouks, as we get through with it you can tell us what your position is. You may find that the difficulties you anticipate have dissolved.

MR. FOUKS: Yes, as long as you do not mind my holding any remarks I might have until that point.

THE CHAIRMAN: No. With regard to page 1 of Exhibit 52-000, the capital cost savings, are there any questions which anybody would like to raise?

COMMISSIONER THOMSON: Yes. It might save a lot of time later on if we cleared this up now. You say the saving to the railway in constructing the shorter route -- we have been working on this and I am in difficulty as to these mileages. Is there any formula that you use in estimating mileages on railways? On Map No. 2 you gave us the mileage figure from Pine Point through to Bell Rock and to Waterways, and I wonder if we could just get those figures established. If you read the briefs you will see there are several different mileage figures given. If you measure that off the map must you add a certain percentage for construction purposes?

MR. GRIMBLE: Yes, you usually add a percentage depending on how rugged the country is.

COMMISSIONER THOMSON: Yes, but until you have a survey you would not know that. What is your figure, so that we will not be left in the dark? Let us have the final figure of your measured mileage



from Bell Rock to Pine Point to Waterways. You have that, have you not?

MR. GRIMBLE: Pine Point to Bell Rock to Waterways?

COMMISSIONER THOMSON: Yes; you can either break it down, or give it to us as a whole.

MR. GRIMBLE: It is 220 miles to Pine Point---

COMMISSIONER THOMSON: That is from Pine Point?

MR. GRIMBLE: From Waterways to Peace Point.

COMMISSIONER THOMSON: From Waterways to Peace Point?

MR. GRIMBLE: Yes. It is 395 by ---

COMMISSIONER THOMSON: Just a minute. What was that figure?

MR. GRIMBLE: It is 220 miles to Peace Point, and 395 miles from Waterways to ---

COMMISSIONER THOMSON: Have you not got that in inches so that we can just multiply it by 8 every time?

MR. GRIMBLE: No, I have not.

COMMISSIONER THOMSON: Waterways to Peace Point is what?

MR. GRIMBLE: Waterways to Peace Point is 220 miles.

COMMISSIONER THOMSON: And Peace Point to---

MR. GRIMBLE: Waterways to Pine Point is 395 miles.



COMMISSIONER THOMSON: Waterways to Pine Point is 395 miles?

MR. GRIMBLE: Yes.

COMMISSIONER THOMSON: All right. On the western route what do you get from Grimshaw to ---

MR. GRIMBLE: Grimshaw to the junction is 355 miles.

COMMISSIONER THOMSON: How do you arrive at that figure?

MR. GRIMBLE: Well, this is actually out of Major Charles' transcript.

COMMISSIONER THOMSON: I notice you always refer to Major Charles' figures. Did you measure it yourself?

MR. GRIMBLE: Yes, we have a similar figure. We scaled it similarly -- we scaled both routes similarly, and we are pretty well in agreement with Major Charles' figures.

COMMISSIONER THOMSON: I make it only 312 miles by scaling it off your map. From Alexandra Falls to Grimshaw it is 312 miles. That is what I would like to get -- actual measured inches off the map like that. I cannot reconcile that figure of 355 miles.

MR. GRIMBLE: You must remember that each of these river valleys will require some ---

COMMISSIONER THOMSON: But that applies to both routes. I can agree with your figures more or



less by scaling them off your map on the eastern route, but I cannot get within 50 miles ---

MR. GRIMBLE: These river valleys are not nearly as deep, and they do not require as much development.

COMMISSIONER THOMSON: I think, in all fairness to both routes that that would depend on a survey. You must scale it off and add a percentage to the actual scaled mileage, and from Alexandra Falls following that black line on your map, it is 312 miles, which is a little different from 355 miles. I can agree with your scaled miles on the eastern route, but not with your distances on the western route.

MR. GRIMBLE: You must take into consideration the steep river valleys.

COMMISSIONER THOMSON: But they have not been surveyed. When you are discussing an east route or a west route the first thing to do is to scale the distances off the map and add on a percentage for river valleys, but until they are surveyed you cannot say they are deeper on the west route, or not so deep on the east route. That is what is throwing us off.

MR. GRIMBLE: Of course, we know the depths of these valleys pretty well. These are Major Charles' figures, and he has 355 miles here; 75 miles for the spur to Pine Point, and there is the 40-mile spur to Hay River.



COMMISSIONER THOMSON: You worked out the figures for the western route yourself?

MR. GRIMBLE: Yes, both routes.

COMMISSIONER THOMSON: And you get 355 miles from Grimshaw to Alexandra Falls?

MR. GRIMBLE: Yes, by adding a percentage for development down the river valleys at the various locations.

MR. FOUKS: Did you add the same percentage to both routes?

MR. GRIMBLE: Well, we took into consideration the river valleys, actually.

MR. FOUKS: Did you add the same percentage to both routes?

MR. GRIMBLE: No, they are taken mile by mile.

MR. FOUKS: What percentage did you add to the west route, and what did you add to the east route?

MR. GRIMBLE: You do it on a mile by mile basis. You do not just take a blanket figure.

MR. FOUKS: I thought you said there was a percentage difference.

MR. GRIMBLE: There is a percentage difference, but taking into consideration -- we do not say it is X percentage on the whole route.

THE CHAIRMAN: I think Major Charles did that.



MR. GRIMBLE: Yes, he covered this pretty well.

THE CHAIRMAN: He would add more on one route than he would on the other for the variation from the straight line; is not that right, Mr. Fouks?

MR. FOUKS: I frankly do not know, my lord, if that is the way he would have done that.

THE CHAIRMAN: That is my recollection of the way he did it.

MR. GRIMBLE: Yes, that is correct.

MR. FOUKS: I was wondering which way Mr. Grimble did it. Major Charles said he covered it in intimate detail, and he had pictures and everything else. I was wondering how Mr. Grimble did it.

THE CHAIRMAN: Would you mind telling us, Mr. Grimble?

MR. GRIMBLE: We are fairly familiar with the country, and we had these large scale maps, and that is the way we arrived at it.

THE CHAIRMAN: What mileage have you got from Hay River to Grimshaw? A railway is straighter than a highway. You cannot put a lot of corners in a railway, so your actual scaled mileages cannot differ too much on the one route from the other. If you measure from Hay River to Grimshaw on the map I cannot see how you can add on many miles for crossing river valleys. I would like to get a figure which is unbiased for both routes. From Hay River



along the line you have intimated to be the line it scales 344 miles -- that is, from Hay River to Grimshaw is 344 miles. You might add a percentage, and arrive at a figure away in excess of that, and I would like to know which figure we should use.

MR. GRIMBLE: I think it would be better to use Major Charles' mileages.

MR. BISHOP: Could I point out for the record, Mr. Chairman, that while there are many river valleys on both routes -- and, as Mr. Anderson-Thomson has pointed out, the details of these would depend on a detailed study as to the actual additional mileage that would be created by most of those river valleys -- in the case of the western route there are two or three very wide and very deep valleys, I might say, which are too wide to be bridged, and I am thinking particularly of the Beaton and the ---

COMMISSIONER THOMSON: Not the Beaton.

MR. BISHOP: No, I mean the Notikewin. In such cases it is comparatively easy to estimate the additional mileages which will be incurred in getting from the top of the bank down into the valley and then getting back up, but that is not comparable to the various rivers, for instance, flowing into the Athabasca which probably call for bridges and trestles. I think that was discussed before, but I do not think it is being made clear here.



COMMISSIONER THOMSON: I don't want to start arguing, but I didn't think that there were any bad river valleys. There are no bad approaches on the highway.

MR. GRIMBLE: There are a few deeper valleys - Notikewin, Hotchkiss. Of course, the highway has 6 per cent grades.

COMMISSIONER THOMSON: I was wondering if we couldn't measure them off on the map and add a percentage and be within a few miles of the right figure.

MR. GRIMBLE: I think if we use Major Charles' figure it would be as fair a comparison as we could make.

COMMISSIONER THOMSON: And his mileage figures on the east route also?

MR. GRIMBLE: Yes. We have his mileage figures in the transcript on both routes.

COMMISSIONER GAINER: The figures you have quoted here for both routes are exactly as those used in Major Charles' evidence, page 1091 and 1123 of the record.

MR. GRIMBLE: Yes. We are discussing page 1. The only figure we have added is the 20-mile spur to Bell Rock and this is our figure.

COMMISSIONER GAINER: Which you suggested in earlier evidence might add 60 miles.

MR. GRIMBLE: Yes.

COMMISSIONER THOMSON: In speaking of Pine



Point, you go to the east end of Pine Point, let's say of the workings, and they are approximately 30 miles long.

MR. GRIMBLE: We went to the point marked Pine Point on the map.

COMMISSIONER THOMSON: Then the C.M.S. would have to build another 30 miles of their own to exploit the western end.

MR. GRIMBLE: This is to their shaft, the present workings. This is where they plan to use surface operation without underground work.

COMMISSIONER THOMSON: To get a fair figure you should go to the middle of Pine Point.

MR. GRIMBLE: I don't know whether their present workings are in the middle or at the east end.

COMMISSIONER THOMSON: So that you should really split that difference. However, it is a minor point.

MR. FEEHAN: I am not sure I understood this correctly, sir, but I believe Mr. Grimble has stated that he has accepted Major Charles' figures for the west route, but he has not accepted the figures for the east route. Major Charles has said that it would add an additional 40 miles to go to Bell Rock.

MR. BISHOP: May I interrupt, Mr. Chairman? I think that 40 miles was thoroughly discussed later and I think it was agreed that that was what you might term a very much off-the-cuff remark of Major



Charles. I think the transcript will show that the necessary spur is approximately 16 miles. The large exhibit over on the wall - I don't know the number - was put into evidence for the purpose of showing how the line could be looped or a spur could be put in to Fort Smith or Bell Rock Harbour.

MR. FEEHAN: That was not quite my point, sir. This page 1 is a statement which I presume Mr. Grimbble wants us to rely upon, and he has taken issue with the statement of Major Charles regarding the east route, but he doesn't want to discuss Major Charles' figure or tell us where he got his figures on the west route.

MR. GRIMBLE: We have used Major Charles' figures for the east route and Major Charles' figures for the west route. We have had to add a 20-mile spur to the east route. This is the only thing on the page which we have had to add ourselves. We have not questioned anything of Major Charles at all.

MR. FEEHAN: As far as the west route is concerned.

MR. GRIMBLE: As far as any route.

MR. FEEHAN: I am assuming now that this railway is going to go to Bell Rock or in the vicinity.

THE CHAIRMAN: Major Charles' suggestion, I think, was that the railroad would not come any closer - I thought it was 20 miles - within 20 miles of Fort Smith. But I think there was a little confusion



because the distance from the railroad to Fort Smith is a little bit different from the distance of the railroad to Bell Rock Harbour. I know I asked Major Charles then if it would - and this was an error on my part - would it be an additional 40 miles if you take the railroad into Fort Smith, and before I corrected myself he corrected me and said if you are going to go at right angles it would be 40 miles, but it would be somewhat less if you take the bend. We didn't pursue the matter any further to see what the distance would be. But, as I understand this estimate that is being made, you are suggesting that the railroad stay the 16 miles, or whatever it is, away from Fort Smith or Bell Rock and then you are assuming that if the spur line is built it is going to cost \$1,900,000.

MR. GRIMBLE: Yes, that is right. So we use everything of Major Charles except that one figure which we estimate ourselves.

MR. FEEHAN: I am interested in pursuing Mr. Anderson-Thomson's question of how this additional 43 miles was acceptable to Mr. Grimble. I would like to know where it comes from. The distance measured by a measure is 312 miles, and Mr. Grimble is prepared to accept the figure of 355; there is a difference of 43 miles there. He said it is for river valleys, but we don't know how it is arrived at.

THE CHAIRMAN: The 40 miles we are talking about on the eastern route is a different matter



entirely.

MR. FEEHAN: Yes, a different matter entirely. I was thinking of the fact that in the bridge across the Peace River it is only an additional 7 miles on each side of the river, which would only total 14 miles.

What I am interested in is where this 43 miles comes from.

COMMISSIONER THOMSON: Yes, I think that was the point I was trying to make. In reading the briefs, every time Mr. Grimble refers to the western route he always refers to Major Charles' figures. Now, are you agreeing that Major Charles' figure is exactly the same as you have by measuring it?

MR. GRIMBLE: Rather than get into long discussion, we have accepted Major Charles' figures.

COMMISSIONER THOMSON: Would it not be easier for you to say we have measured the eastern route and it is so many miles, and we have measured the western route and it is so many miles? When you come to the western route you always say Major Charles' figures.

MR. GRIMBLE: Since Major Charles gave his evidence, we have referred back to his information, both east and west.

COMMISSIONER THOMSON: If it is only 312 miles, the percentage that you would add, could you bring that up to 355 from 312?

MR. GRIMBLE: I am not aware of the 312.

COMMISSIONER THOMSON: Well, it measures



that on your map.

MR. GRIMBLE: Yes. Since Major Charles gave his testimony we have always referred back to his rather than introduce anything knew.

MR. BISHOP: I think the answer, Mr. Anderson-Thomson, is that Mr. Grimble has been using Major Charles' figures for both routes, but Major Charles detailed study on the western route, due no doubt to the large river valleys, gives 355 miles to the junction, and Major Charles' detailed study of the eastern route happens to give substantially the same distance as you get by scaling on Mr. Grimble's map. In other words, Mr. Grimble is not being inconsistent; he is using Major Charles' figures in both cases, but in the one case it happens to coincide with a direct route on the map, and in the other case it doesn't. But it comes from a study of Major Charles' figures on both routes.

COMMISSIONER GAINER: In other words, we should ask Major Charles to account for the difference.

MR. BISHOP: That is right.

COMMISSIONER THOMSON: In other words if Major Charles had been laying out the western route, it would come to considerably less.

MR. GRIMBLE: No, I wouldn't say that, sir. For the purpose of this exhibit, we have used Major Charles' figures throughout.

MR. FOUKS: I would like to know where the



figures 40 miles, spur, Hay River, \$7 million came from.

MR. GRIMBLE: We asked Major Charles for that figure.

MR. FOUKS: Is it in the transcript?

MR. GRIMBLE: No.

MR. FOUKS: I would like to know where that came from. The 40 into the \$7 million is \$175,000 per mile, approximately. The 20 miles to Bell Rock - and I would like also, if it is available, where it is going. Does it go to Bell Rock, Fitzgerald, and the 20 miles is \$95,000 per mile, going west to Hay River and east to Bell Rock. I would like submitted a complete list of how these figures are arrived at in detail.

MR. GRIMBLE: The \$7 million is Major Charles' figure. There is a large bridge involved. The spur is to Bell Rock.

THE CHAIRMAN: You are assuming that if the railroad is built along the east route there is no spur from Pine Point on to Hay River with the bridge across the river there.

MR. GRIMBLE: No, sir. We compared Waterways, Bell Rock with the western route, Pine Point and the spur into Hay River.

THE CHAIRMAN: You are not taking the spur in the eastern route.

MR. GRIMBLE: No.

THE CHAIRMAN: Would there be any difference



in the cost in the spur between Enterprise and Hay River and Pine Point and Hay River?

MR. GRIMBLE: Yes. Pine Point to Hay River would be something more.

THE CHAIRMAN: Much more?

MR. GRIMBLE: I think there would be a little over a million dollars more. It would be roughly one and a half million dollars more to go from Pine Point to Hay River than from Enterprise to Hay River.

THE CHAIRMAN: So if the railroad were to be built along the western route with the spur into Hay River it would cost, you estimate, \$3,400,000 more than going along the eastern route with the spur into Bell Rock, but if you were to build it along the eastern route and then build the spur on to Hay River, the eastern route would be more expensive than the western route.

MR. GRIMBLE: Yes, sir.



COMMISSIONER THOMSON: Well, do you think that \$3,400,000 is an excessive amount to pay for a service into the harbour at Hay River? It is not a fair comparison. Supposing on the western route you said: "Let us build a spur into Providence", and then say how much it is you are not allowing for how much benefit Hay River is getting from that spur. If you are to compare that I think it would be only fair -- it does not cost \$3,400,000 to put a spur into a good harbour, does it?

MR. GRIMBLE: Let us say the two alternatives are reasonably comparable. You can compare these two alternatives. You have the harbour at Bell Rock, and on the western route you have the harbour at Hay River. In both cases you serve Pine Point, and in both cases you serve a harbour.

COMMISSIONER THOMSON: Yes, but to make a good comparison I still think you should put a spur into Hay River from Pine Point also. If you did that on the one route you should do it on the other.

MR. GRIMBLE: Hay River could be served from Bell Rock.

COMMISSIONER THOMSON: They do not truck into Bell Rock, do they? The Mackenzie Highway does not go to Bell Rock.

MR. GRIMBLE: Supposing Hay River will stay there and the trucking into Hay River will carry on then, as far as the railway is concerned, you have



the transshipment point at Bell Rock, and you do not need it at Hay River.

COMMISSIONER THOMSON: Is \$3,400,000 too much to pay for the service that Hay River might get?

MR. GRIMBLE: Actually, they still get truck service and they can still get service by rail and water, and I am just wondering what the purpose of spending an extra \$3,400,000 would be.

THE CHAIRMAN: You are assuming the requirement to be for one harbour on the east route, and you put it at Bell Rock, and you say, therefore, that you do not have to go to Hay River on the west route to get a harbour; you are going to put a spur on to Hay River?

MR. GRIMBLE: Yes, sir.

THE CHAIRMAN: What about the harbour at Ile du Mort?

MR. GRIMBLE: That would be common to both routes. The distance from Pine Point to Ile du Mort, if it came by the west route, would be common to its coming via the east route. As I said previously there are a good many variations in combinations but what we have done, to simplify this, is to draw a line down the middle and say: "This is comparable to this. It serves all the functions this serves equally as well, and, consequently, we should now compare this alternative with that alternative."

THE CHAIRMAN: If the mine at Pine Point were to be developed from the west end of the property



that would add a distance of 25 miles, would it not, to the eastern route?

MR. GRIMBLE: Yes, sir, although the ---

THE CHAIRMAN: Let us put it this way; it would be proper to assume, would it not, that if the eastern route is decided upon the property will be developed at the east end, and if the western route was followed the property would be developed from the west end, so, perhaps, 25 miles should be knocked off the west end?

MR. GRIMBLE: No, the outcropping is at the east end, of course, and the dip of the ore is to the west. Surface operations would probably be carried on at the east end, which is what they propose to do, I understand. In other words, they would have to dig a deep pit to start operations at the west end whereas at the east end the ore is on the surface. The ore dips about 20 feet per mile to the west, so every mile you go to the west you are having to go 20 feet underground.

COMMISSIONER THOMSON: But you would still have to truck your ore to the eastern terminus if the railway was built at the east end?

MR. GRIMBLE: Probably 20 or 30 years from now they will be doing that.

COMMISSIONER THOMSON: Nevertheless, if your orebody is an elongated orebody you have your choice. You can put the shaft in the middle and



truck both ways, or you can put it at the one end and eventually have to truck the whole distance?

MR. GRIMBLE: They figure there is a 30-year supply and they have been considering open pit mining at the east end to start with.

COMMISSIONER THOMSON: And they would subsequently sink a shaft at the west end?

MR. GRIMBLE: They figure a large portion of it can be taken out by open pit mining, but at the west end they would probably have to go into an underground operation.

COMMISSIONER THOMSON: In which case they would have to start at the west?

MR. GRIMBLE: I do not know how they would operate.

COMMISSIONER THOMSON: If your ore is dipping to the west you would obviously have to put your shaft to the west, would you not?

MR. GRIMBLE: Yes.

THE CHAIRMAN: You are quite sure of the open pit mining being the operation that is planned for ---

MR. GRIMBLE: We might read that again in the exhibit that we offered on this matter. It is referred to in that. We had an exhibit in which we read an account of the Pine Point mine, and it was referred to in that.

THE CHAIRMAN: Who was it prepared by?



MR. GRIMBLE: It was prepared by the Department of Mines and Resources in Ottawa, and it is an exhibit that I read out.

THE CHAIRMAN: We will have a look at it.

MR. BISHOP: I think it is Exhibit 52-VV.

THE CHAIRMAN: Have we finished with page 1 now?

MR. FOUKS: No, I have not, sir. I think Commissioner Gainer has a question.

COMMISSIONER GAINER: As we are moving along I have this one question, Mr. Grimble, relating to the cost per mile which you have used in connection with the route from Waterways to Pine Point. It worked out, if I am not mistaken, to around \$152,000 per mile -- that is based on the mileage figure you mentioned -- and \$170,000 per mile for the Hay River spur. Can you just give us some indication of the justification for that sort of variation on either the main chunk of the line or on either of those spurs?

MR. GRIMBLE: You have added the bridges in both cases?

COMMISSIONER GAINER: I beg your pardon?

MR. GRIMBLE: You have the bridges in both of these cases.

COMMISSIONER GAINER: Yes.

MR. GRIMBLE: Unless you started at the bridges it would be hard to compare them.



COMMISSIONER GAINER: Would you accept the cost of the bridge at Hay River to be about \$1 million?

MR. GRIMBLE: No, I did not have the figure for that, actually. I did not have the figure for that bridge. It is Major Charles' figure, and I do not know whether we have broken it down, or not.

THE CHAIRMAN: What would you think the bridge would cost at Hay River, Mr. Grimble?

MR. GRIMBLE: I have some comments on these costs. The cost of the bridge would be somewhere in the order of \$1 million, and that is a very round figure. The northern part of both routes has a higher average cost per mile by virtue of the clearing and trainhaul in the swampy and muskeg areas, etc. If you take an overall average for the whole route you really are not comparing the same things.

COMMISSIONER GAINER: Would it not be true to say that if you took off one and a quarter million dollars for the bridge at Peace Point -- which I think would be ample -- your average would work out at \$140,000 per mile between Waterways and Pine Point?

MR. GRIMBLE: There is the bridge on the Athabasca and the bridge at Peace Point. What did you take off?

COMMISSIONER GAINER: I took off two and a quarter million dollars from your sixty and a quarter million dollars from Waterways to Pine Point.

MR. GRIMBLE: You would have to take off



roughly \$5 million for the two bridges -- no, pardon me; \$7 million for the two bridges. In round figures it is \$7 million for the two bridges.

COMMISSIONER GAINER: Does that check with the figures quoted before?

MR. GRIMBLE: Yes, those are the same.

COMMISSIONER GAINER: Just looking at it casually it would still be considerably in excess of \$100,000 a mile, and I am wondering if on that round figure, exclusive of the bridge, you would figure the ground in the vicinity of your spur to Bell Rock would make that much difference ---

MR. GRIMBLE: The spur to Bell Rock would be on good ground; that is fairly good ground. The ground from Enterprise to Hay River, of course, is parallel to the highway, and this has patches of muskeg, and so on. I think you will find your figures now are reasonably close.

COMMISSIONER GAINER: I doubt it. I can work through them in a minute to see.

COMMISSIONER THOMSON: Did you say, Mr. Grimble, that from Alexandra Falls into Hay River it is on swampy ground?

MR. GRIMBLE: There is quite a bit of muskeg west of the highway.

COMMISSIONER THOMSON: The highway is on a gravel ridge.

MR. GRIMBLE: The highway follows the river.



COMMISSIONER THOMSON: Yes, on good gravel?

MR. GRIMBLE: It parallels the river whereas if you leave that and go even 100 feet further west you are into ---

COMMISSIONER THOMSON: Why would you want to leave it?

MR. GRIMBLE: There is not much room for both a highway and a railway along the river. You have to put the railway west of the highway.

COMMISSIONER GAINER: My figure is about \$130,000 a mile on the main route as contrasted with about \$95,000 a mile on your spur. Do you think this would be about the order of difference in construction costs on the spur and the average for the route from Waterways to Pine Point?

MR. GRIMBLE: Which spur are you speaking of now?

COMMISSIONER GAINER: The spur into Bell Rock that you have estimated as 20 miles at \$1,900,000.

MR. GRIMBLE: Yes, I think that would be a reasonably good comparison. You see, your average there includes bridges, too. Your figure of \$130,000 includes all of the bridges that would be involved except the big ones.

COMMISSIONER GAINER: Yes, I took the big ones out.

MR. GRIMBLE: What we are talking about is a 20-mile spur without any major bridges of any



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consequence.

COMMISSIONER GAINER: In any event, that is the basis of your calculation, and you are prepared to stand by it?

MR. GRIMBLE: Yes.

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THE CHAIRMAN: What would you suggest would be a reasonable cost per mile of the spur from Enterprise to Hay River, that 40 miles?

MR. GRIMBLE: \$150,000 a mile would be a reasonable figure.

THE CHAIRMAN: You think it would be that high?

MR. GRIMBLE: Yes.

MR. FOUKS: Mr. Chairman, I would still like to know where the 19 came from. Where did it come from?

MR. GRIMBLE: This is a figure that we have introduced; this is the only figure we have introduced.

MR. FOUKS: Did you ask Major Charles about that figure?

MR. GRIMBLE: No. He hadn't figured out one into Bell Rock, but he had figured one out into Hay River.

MR. FOUKS: I wonder if I could have what Major Charles said.

THE CHAIRMAN: Do you have something in writing from Major Charles?

MR. GRIMBLE: No, just in conversation.

MR. FOUKS: If he had a figure - it would be a great deal of trouble to call Major Charles here - I am sure he wouldn't object to giving it to us in writing.



THE CHAIRMAN: Why don't you get in touch with Major Charles?

MR. FOUKS: I would be very pleased to, in both cases.

If I might read something. It is in respect to Hay River and a bridge which has been brought up - I am quoting from the transcript, volume 20, October 20th, discussions being held. I think these comments, I might say, are merely appropriate at this time because of the question of a bridge and the cost factor.

THE CHAIRMAN: Suppose we adjourn until five minutes to three and then you can find it.

--- A short recess.

MR. FOUKS: The position is that Mr. Grumble, in quoting Mr. Grumble from the volume which I indicated on October 20th, indicated that there was no particular problem as far as the bridge or going into Hay River. In fact, at the last culmination point he says this:

"It is a matter of detailed study. This ground is surprisingly good along the highway and also out on the escarpment there would be a matter of weighing the cost of going through this low ground and climbing the additional height up to the escarpment. That is something I am not prepared to answer".

I submit, with the greatest respect, that



it is difficult for me to understand - -

THE CHAIRMAN: What is the page?

MR. FOUKS: Pages 2495 to 2497 - it is difficult for me to understand that that approach should be made then and we now have a different one. It started from a question from you, Mr. Chairman:

"And how far is that point from Hay River?

" MR. GRIMBLE: That point is 40 miles from Hay River.

" THE CHAIRMAN: Suppose you take the poorer bridge site and try to get the shorter distance, how far would you be from Hay River?

" MR. GRIMBLE: In terms of going to Providence, it is a case now, probably 60 miles from Pine Point to a poorer bridge site, so you probably save 15 miles of railroad, and you would have to weigh that against your bridge costs.

" THE CHAIRMAN: How close would you be to Hay River if you built that more expensive bridge?

" MR. GRIMBLE: Oh, you would probably be twenty miles south of Hay River -- building a railroad from Pine Point to Providence you would probably be 20 miles outh of Hay River.

" THE CHAIRMAN: You could not get any closer than that?

" MR. GRIMBLE: Oh, yes, you could go directly in.

" THE CHAIRMAN: Suppose you went in to Hay



" River from Pine Point to Hay River and came out
" again, to get on top of that escarpment?

" MR. GRIMBLE: You would have extra mileage.
" There would be 50 to 60 miles and then 20 miles,
" so you would have 70 miles as compared to 60 miles.

" THE CHAIRMAN: But you would have got into
" Hay River?

" MR. GRIMBLE: Yes, sir.

" THE CHAIRMAN: Would Hay River be an awk-
" ward river to bridge for a railway close to the town
" of Hay River?

" MR. GRIMBLE: No, sir, there are two good
" sites, either at the town at the mouth of the
" river or above the falls.

" THE CHAIRMAN: You would not be interfer-
" ing with the harbour with a good bridge site?

" MR. GRIMBLE: No, it would be above the
" harbour a matter of a mile upstream.

" COMMISSIONER THOMSON: And if you brought
" the railway from Pine Point into Hay River as has
" been suggested, could you not go direct from Hay
" River and catch the river at the escarpment.
" It would not be the best terrain, but it would
" not be too bad.

" MR. GRIMBLE: Well, just ---

" COMMISSIONER THOMSON: That would not give
" you too much of a longer route, would it?

" MR. GRIMBLE: It is a matter of detailed



" study. This ground is surprisingly good along
" the highway and also out on the escarpment there
" would be a matter of weighing the cost of going
" through this low ground and climbing the addition-
" al height up to the escarpment. That is something
" I am not prepared to answer."

Now, Mr. Chairman, I am suggesting that the implication or the inference of this compared to the statement on October the 20th are contrary to each other.

MR. GRIMBLE: The point that he read out in the transcript - at that time we were discussing the railway to Providence, and the section that was read out as being critical was referring to this escarpment, which is the escarpment from Enterprise to Fort Providence, in which I stated this was an excellent railway location and also an excellent highway location which is entirely a different thing from what is being discussed here.

THE CHAIRMAN: You are saying from Enterprise to Providence is good ground.

MR. GRIMBLE: No, not all the way. I just pointed out that this ground here from the escarpment is good ground. This is an entirely different subject to what we are discussing now, which is the railway from Enterprise to Hay River.

THE CHAIRMAN: You are saying now from Enterprise to Hay River is poor ground.



MR. GRIMBLE: Poorer ground.

THE CHAIRMAN: You estimate the cost of a spur to Bell Rock Harbour at \$95,000 a mile.

MR. GRIMBLE: Yes, sir.

THE CHAIRMAN: And the cost of the spur to Hay River at \$150,000 a mile.

MR. GRIMBLE: These are Major Charles' figures.

THE CHAIRMAN: You are making the comparison, are you not? Are Major Charles' figures wrong do you think?

MR. GRIMBLE: No. I am saying that the only thing we add to that is \$1,900,000, and the other figures are Major Charles' figures.

THE CHAIRMAN: Do you agree with Major Charles' figures?

MR. GRIMBLE: He has studied them in greater detail than I have, sir.

THE CHAIRMAN: Do you agree with them?

MR. GRIMBLE: I would agree with them, but I haven't studied them as carefully as he has. I agree with them on the basis of the study I have made. He has made a better study than I have made, and I am forced to agree with him.

THE CHAIRMAN: And you think that his figure of \$150,000 is a fair figure?

MR. GRIMBLE: On the basis of the study I have made of it, yes, sir.



THE CHAIRMAN: Why, then, do you feel that the ground in the neighbourhood of Bell Rock is such that you can build the railway there for \$95,000?

MR. GRIMBLE: Yes, that is very good ground.

THE CHAIRMAN: And you think there is that difference, do you, that that is a reasonable difference? Where does the extra cost arise in building the railroad between Enterprise and Hay River, Mr. Grimble?

MR. GRIMBLE: Of course, there are clearing costs and there are grading costs. These are two factors.

THE CHAIRMAN: I don't think we are going to finish this afternoon. Could you give us a breakdown of those costs, those clearing costs and grading costs, the amount for the ties, and so on?

MR. GRIMBLE: We have all that, sir.

THE CHAIRMAN: Would it take you more than 10 or 15 minutes to outline it for us? The actual steel rail costs as much over good ground as poor ground.

MR. GRIMBLE: Yes, and the ties are common to both. The only difference is in the clearing and grading.



THE CHAIRMAN: Is clearing a very big factor on a project such as these northern railroads?

Well, you have the figures, anyway.

MR. GRIMBLE: Yes, but I was trying to give you something a little more accurate, if I could.

THE CHAIRMAN: Mr. Fouks, did you get that?

MR. FOUKS: Yes, my lord.

THE CHAIRMAN: Is there anything else from page 1 that we want to go into before we go on?

MR. GRIMBLE: I gave you some figures before the adjournment, and we have found something in Major Charles' transcript which would throw more light on it. At page 1136 Major Charles estimates the cost of going from Pine Point to Hay River including the terminus at \$10,650,000.

THE CHAIRMAN: How much?

MR. GRIMBLE: \$10,650,000. Also, Mr. Regan tells me the bridge over the Hay River would cost closer to \$750,000 than \$1 million, which I gave you as a round figure.

THE CHAIRMAN: That clears up page 1, does it? Shall we go on to page 2? Do any questions arise there? Can we leave page 2?

MR. FOUKS: No, my lord. We were wondering in regard to this capital cost saving on acreage whether that was included in Major Charles' figures, or not, because he did discuss it, and seeing that my friend has been discussing this matter with Major



Charles, maybe he would have the answer automatically to that. I may have to find the page again, but Major Charles indicates that he merely covered it slightly when he made the remark about taking into consideration the purchase of land, etc., and said that the costs were so and so, and I was wondering whether these acreage cost figures were included in Major Charles' figures, or not.

THE CHAIRMAN: What do you say, Mr. Grimble?

MR. GRIMBLE: I do not know, sir.

MR. FOUKS: Then, I think they should be withdrawn from that sheet, my lord.

THE CHAIRMAN: Is there anything else in regard to page 2?

MR. FOUKS: If I find anything I will mention it later, with your permission, my lord.

THE CHAIRMAN: Very well. Page 3?

COMMISSIONER THOMSON: With regard to these figures on page 3 -- I mean, how do we arrive at the conclusion that there are three extra stations on the western route -- is that right, or is it the eastern route?

MR. GRIMBLE: Yes, sir.

COMMISSIONER THOMSON: Why would you figure three extra stations on the western route?

MR. GRIMBLE: These are estimates made on the basis of the settlement at Fort Vermilion and the settlement at Manning, for example, and also at Keg



River. There would be extra stations.

COMMISSIONER THOMSON: Would there not be extra stations -- I mean, are you considering the eastern route as your eastern route, or as Major Charles' eastern route?

MR. GRIMBLE: Either -- it is immaterial -- either one.

COMMISSIONER THOMSON: If you use yours would you not be going into Smith -- no, you do not go into Smith, but you go into Bell Rock.

MR. GRIMBLE: These are extra stations in addition to ---

COMMISSIONER THOMSON: These are additional?

MR. GRIMBLE: Yes.

COMMISSIONER GAINER: What about an extra terminal, Mr. Grimble, on the western route?

MR. GRIMBLE: Mr. Cooper in his testimony stated they would require an extra terminal.

COMMISSIONER GAINER: Is that what you mean? He indicated three, or something, as compared to two on the other route.

MR. FEEHAN: Those were divisional points.

THE CHAIRMAN: Is that what you mean by that?

MR. GRIMBLE: Yes, sir, that is right.

COMMISSIONER THOMSON: If you build a station you build it -- by that you mean a railway station?

MR. GRIMBLE: Yes, sir.



COMMISSIONER THOMSON: If you build a railway station do you not build it where there is traffic? If you build it where there is no traffic there would be little or no revenue -- or am I wrong, again? If you build three stations on a line it means you would have traffic on the line, and it would be an advantage to have to build three extra stations. You would not build a station unless it would pay for itself -- or, would you? I don't know anything about railways.

MR. GRIMBLE: I think they are required to build some stations at certain points whether they pay for themselves or not. I am not a railway man myself either, sir.

COMMISSIONER THOMSON: Would there not be enough traffic at Manning to justify that?

MR. GRIMBLE: Passenger traffic?

COMMISSIONER THOMSON: No, I would not say passenger traffic, but anything. When you build a station do you not build it in anticipation of something being shipped from that station?

MR. GRIMBLE: They probably would be required to build a station whether it would pay or not.

COMMISSIONER THOMSON: If you went down the eastern route there would be no reason to build a station from Waterways to Peace Point?

MR. GRIMBLE: No, they would not need stations there. They would build sidings, but not



stations.

MR. BISHOP: I think, Mr. Chairman and Mr. Anderson-Thomson, the point we are dealing with now is a question of discussing actual costs that occur on the two alternative routes. The question of evaluation of whether certain capital costs would be justified, or would be a good thing, is another factor. We might carry your last question to its logical conclusion and say that the cost of a railway would only be incurred if we are going to have traffic. In the same way the railway costs so much to build, and if there are more stations on one side than there are on the other side then that side is going to cost more because of the extra stations, and then that is one of the extra costs. It still may be true that those extra stations are in themselves evidence of greater traffic for that railway, and we might still end up with, for example, a figure for the western route which indicates that it costs \$50 million less, but the traffic or advantages shown on the eastern route might still be enough to justify the expenditure of the extra \$50 million. In other words, at this stage where we are discussing capital advantages one way or the other we should not be confused in deciding whether such a capital expenditure is a good thing. Do you follow my argument?

MR. FOUKS: I follow the argument, but, frankly, I cannot accept it personally because once



you are embarking on a capital cost the indication is that it is an expenditure without a return of some sort. Unless you are prepared to credit it with whatever earning power it might have I do not think it is fair to put it down as a capital cost, and if you do not, then it is a capital saving. On that basis we would not build anything anywhere. Imagine the money we would have if we did not spend it.

Still referring to page 3, I am advised by Mr. Guest that the ICC regulations require a station every 500 miles, and, therefore, one extra terminal is an unnecessary item under the present regulations regardless of what the regulations may be in the future.

THE CHAIRMAN: What is this, again?

MR. FOUKS: The ICC regulations require---

THE CHAIRMAN: What is the ICC?

MR. FOUKS: That is the Interstate
Commerce Commission.

THE CHAIRMAN: The International Commerce
Commission?

MR. FOUKS: No, the Interstate Commerce
Commission.

THE CHAIRMAN: That is in the United
States. What about Canada?

MR. GUEST: These regulations that Mr.
Fouks refers to are the regulations of the American
Association of Railways which requires inspection of



air brakes on diesels and other equipment after running 500 miles. Now, I have noticed in a recent issue of Railway Age which I have with me that they are petitioning the ICC to extend this 500-mile limit to other inspection functions. The fact is that with a diesel operation you do not require a terminal every 200 miles. You can have one every 250 miles, or you can have one every 300 miles. The reason why we have terminals about 150 miles apart is that they are based on steam operation. They are divisional points. They are based on the old steam operation. A good example of this is the PGE on their new northern extension that they run from Prince George to Fort St. John. That is 262 miles, whereas on the southern extension they have divisions every 150 miles, because it was based on a steam operation. I think that it might be possible to have a terminal at Maclellan and one about halfway up the line, and a terminal at the other end. Of course, that is a matter for the management of Northern Alberta Railways, and there are obviously differences of opinion, but that is my opinion.

THE CHAIRMAN: Well, now, as I understood it, the suggestion made by Mr. Cooper was that something like that be done, but that for the eastern route it might not be necessary to have an extra terminal in between at all.

MR. GUEST: I think Mr. Cooper suggested



that Peace Point would be a very good place for a terminal, and also a terminal at Pine Point. That would be two, but he said on the west route we have a terminal at Maclellan and he would propose to put one at Manning which is roughly 200 miles from Maclellan, and then he thought he would require another one prior to reaching Pine Point. What I am suggesting is this, that by the time we come to build terminals in the next few years it is quite conceivable on a new line it will be fully dieselized and it will be operated not on the presentday basis, or the basis which is based on steam, in reality, and which is costing the railways quite a lot of money, but on a basis designed for fully dieselized power with a terminal every 300 miles. It is quite conceivable that we would have the same situation on the west as on the east so far as terminals are concerned.

COMMISSIONER GAINER: As I recall, Mr. Guest, I do not think Mr. Cooper mentioned the necessity for an inspection service in determining the location of these points. I seem to recall one of the items mentioned was the question of train crews, and that these could not run beyond a certain mileage, and it involved the additional shift work, and so on. I believe he mentioned that the terminal was not likely to be moved further north. How would you determine these other factors in terms of dieselization, assuming that dieselization has already taken



place on that line?

MR. GUEST: Well, as I say, the PGE runs from Prince George to Fort St. John which is 262 miles. Now, if we run 250 miles from Maclellan -- the distance from Maclellan to Pine Point would be approximately, say, 500 miles. Now, if the Pacific Great Eastern can do it, and they have the same agreement as the Northern Alberta Railways and the C.N. ---

COMMISSIONER GAINER: The same labour agreement?

MR. GUEST: Yes, there are some minor differences, but they accept the CN and CP agreements.

THE CHAIRMAN: How far is it from Maclellan to Pine Point?

MR. GUEST: I am not quite sure of the distance from Maclellan to Pine Point, but I think it would be -- maybe Mr. Gordon can help me on this.

MR. BISHOP: It is approximately 500 miles.

MR. GORDON: I can soon check it.

MR. GRIMBLE: It is 66 miles from Grimshaw.

THE CHAIRMAN: From Maclellan to Grimshaw is 66 miles?

MR. GUEST: I think it is about that.

MR. GRIMBLE: Grimshaw is Mile 333.7 and Maclellan is 267.



MR. GUEST: 33 and 3467 miles less 6 or 7. Actually the railway turns off at Mile 327, so it is 60 miles. So 430 and 60 is 490 miles. And I might say that the P.G.E. freight - I have their schedule here - runs from Prince George to Fort St. John and starts at 7.35 at night and gets in at 5.30 in the morning - ten hours, 262 miles.

COMMISSIONER GAINER: You don't know whether they consider that to be an economic way of doing things in that area.

MR. GUEST: They find it is the most economic way of doing things. As a matter of fact, I discussed this with the general manager and he said if they were extending northward they would try to get past that. He is thinking of a 320 division, and the railways generally in Canada are trying to lengthen their division as much as they can to conform to the technology of diesel power, economies of diesel power.

MR. BISHOP: Mr. Chairman, I think Mr. Cooper in his testimony made it clear that he was thinking in terms of dieselized operations. He started out his remarks by referring to the fact that divisions were shorter, but with the various factors he felt to be relevant he still ended up with three divisions, counting the terminal 1 on the western route and 2 on the eastern route, and that is what we are relying on on this page 3.

THE CHAIRMAN: Have you found anything,



Mr. Fouks?

MR. FOUKS: Yes, I found the part at page 1087, volume 10, dated September 29th, 1959. Major Charles is discussing the cost factor, of course, here, and I will now read verbatim:

"Factors affecting cost of construction of this 175 mile section are: the value of property required for right-of-way; the clearing would be comparatively light, with open areas; grading materials would not be particularly difficult to handle, but quantities on account of the approaches to river crossings, would be comparatively heavy; bridging would be a major item".

So, in other words, page 2 as submitted here has been considered by Major Charles in his cost of construction, and Mr. Grimble indicated that he accepted Major Charles' cost of construction in the first place, and therefore that page should be withdrawn.

MR. GRIMBLE: I guess he is right, from the quotation in the transcript.

THE CHAIRMAN: We must now disregard page 2, Mr. Grimble?

MR. GRIMBLE: Yes, sir. What I must have been considering is the Alberta Government talking about free right-of-way, and I thought that was not taken into consideration.

THE CHAIRMAN: What about page 3? Do you



still feel that page 3 should stay where it is?

MR. GRIMBLE: Yes, sir. It is according to Mr. Cooper's testimony.

THE CHAIRMAN: Have you considered these pages in the light of the evidence which has already been given? Did you read Major Charles' evidence before you prepared this statement?

MR. GRIMBLE: Yes, sir, we read it quite closely. This one must have escaped us.

THE CHAIRMAN: Is there anything more to be said on page 3? Page 4?

COMMISSIONER THOMSON: Yes, I have a question on page 4. That is the one dealing with the Fort Vermilion to Fort Smith highway. Am I right?

THE CHAIRMAN: Yes.

COMMISSIONER THOMSON: Isn't that a commitment that has been already made? They started that road, have they not? I thought that commitment had been made by the government.

MR. GRIMBLE: It is cleared from Peace Point to the fifth Meridian. As Mr. Clement said, he is certain the government have taken this all into consideration.

I might point out one error on page 4. On the summary item 4 has been shown as a yearly item and then at the bottom multiplied by 20 years, whereas on page 4 it is shown as merely an assumption on a 10-year deferment. So this particular one should



be multiplied by ten rather than twenty.

MR. FEEHAN: I don't understand that this should be considered an advantage to the capital cost of the eastern route. It seems to me it wouldn't matter whether it was built to the east or to the west; it could be deferred in either case.

MR. GRIMBLE: If the railroad isn't built into Fort Smith, then the need for access by road would become more critical, whereas if it is there the need would be less critical.

COMMISSIONER THOMSON: Have they not spent about \$4 million on that road?

MR. GRIMBLE: All they have done is clear from Peace Point to the Fifth Meridian. They have cleared from Fort Vermilion, but they haven't gone beyond the Fort Vermilion junction to the east. They have cleared into Fort Vermilion but not built.

COMMISSIONER THOMSON: I thought the Government were already committed to that road. Have you any assurance they would drop it or defer it?

MR. GRIMBLE: Well, let's say they could defer it. As far as saving the capital cost, it wouldn't be required; let's leave it at that.

MR. FEEHAN: I am just wondering if Mr. Grimble is serious in presenting this as an advantage to the east route or merely disregard it. It is merely an assumption, and I would recommend it be disregarded, unless Mr. Grimble has something more to



offer.

MR. BISHOP: I think, Mr. Chairman, for the purposes of this particular portion of the study, we are attempting to evaluate all the physical factors. As I mentioned previously, there may be reasons why, in either case, in the case of either route, you might or the governments concerned might feel it worthwhile to spend more money to provide additional facilities. There may be also political reasons, and I say that in its broad sense, why certain things may be desired not to be done, but in a case such as this one we submit that any money that has not been spent, regardless of what arrangements have been made - and we know that governments have on various occasions changed their announced plans - it should still be taken into consideration, and we have attempted to evaluate it. Whether the provincial government, for instance, might feel, regardless of the fact that Fort Smith would, in the case of the eastern route, be served by rail, that they should build the highway, anyway, and spend the taxpayers' money, as it all is, for a highway as well, would be in the nature of a political decision.

THE CHAIRMAN: Mr. Bishop, I understood page 4 to mean this - and tell me whether you think I have read it correctly - that what you are doing is making a decision; however desirable that road may be from Fort Vermilion to Peace Point, it can be more readily dispensed with if the railroad goes the



eastern route rather than the western route.

MR. BISHOP: More readily deferred. We are assuming that the main purpose of that road is to give some sort of access to Fort Smith and the areas on the eastern side, and if the railway goes up the eastern side, then they do have adequate access. Maybe in ten years they should have both types, but we have not shown it as a capital saving, we have shown it merely as a deferment, and that is the reason for the correction Mr. Grimble mentioned earlier. On the summary it was added in with all the other yearly charges and multiplied by 20, whereas this one should be multiplied by 10. We are assuming that that road will be built some day.

MR. FEEHAN: Sir, it is much like saying that if it took the west route there would be no need for a road to Uranium City and that is an advantage to the west route. It would certainly save the building of 140 odd miles to Uranium City. Now, the argument is exactly the same: there would be no necessity for building that road, therefore the west has an argument in its favour.

MR. BISHOP: I think the difference has been pointed out earlier, partly by Mr. Feehan himself, in that obviously if it goes the western route that road is going to be built. There has been no such announcement in the program of a road from Fort Smith to Uranium City, so we don't feel they are quite



comparable. Maybe in ten years that will be built, too.

COMMISSIONER THOMSON: Do you recommend that the road should not be built if it goes the eastern route, into Fort Smith?

MR. GRIMBLE: Let's say the need for the road would be much less.

MR. BISHOP: Mr. Anderson-Thomson, that falls again into the category of things which, for the sake of the present discussion, we are listing as outside the scope of this comparison, though possibly very desirable. I think your earlier suggestion of an extension from Pine Point to Hay River in the case of the eastern route - it might be felt that, having provided rail access to Pine Point and having provided rail access to water, a trans-shipment point, it is still worth the extra cost to give extra service to Hay River. Maybe at a further stage it is worthwhile to go into Fort Providence, or maybe by that time there is a point that it might be worth building north-east of Smith, and at the same time it might be felt that it is worth spending more money to give access to other areas on this particular route. But we are submitting that by giving Peace Point and Fort Smith their access by rail we are removing the immediate necessity, and thereby deferring it, of giving that access by road and we are giving the governments who maybe committed to greater or lesser



extends the choice of saving that particular cost.

Now, a government may feel that it has promised people that road, but the people who are most affected are the people who are going to gain access by that road and it is probable they are going to trade a railroad for a road.

THE CHAIRMAN: Is there a winter road across there now, Mr. Grimble?

MR. GRIMBLE: No, there isn't.

THE CHAIRMAN: You estimate the cost at \$12 million .

MR. GRIMBLE: Yes; \$50,000 per mile, which is roughly the cost of the Mackenzie Highway, reconstructed Mackenzie Highway.

THE CHAIRMAN: And I think you told us there was a road cost of \$1,000 a mile.

MR. GRIMBLE: It could be in that order, yes.



THE CHAIRMAN: Is there anything else?

MR. FOUKS: Yes, my lord. If I may refer to page 4 -- I might have misunderstood this at some place, but do I understand that the Edmonton position is that that programme will be deferred?

THE CHAIRMAN: I did not understand that.

MR. FOUKS: No. It was a supposition or a suggestion.

THE CHAIRMAN: It was a suggestion that a deferment was something that could more readily be arranged with an eastern railway than with a western railway.

MR. FOUKS: Does that mean they would recommend it? Is that the position?

THE CHAIRMAN: I do not know whether it is relevant as to whether they would recommend it or not.

MR. FOUKS: I suggest it would be, my lord, the moment it is put on a savings sheet. The moment they say it is a capital saving ---

THE CHAIRMAN: Perhaps Mr. Bishop will tell us.

MR. BISHOP: I thought I had dwelt on that at length already. We are attempting to value the costs which would be necessary on one route as against the costs on the other route, and included in such are the costs which might be deferred in the case of one route as against costs which might be deferred in the case of the other



route. After having weighed those costs and made a decision, bearing in mind all the other factors, any government concerned -- and in this case there would be two, I guess -- might decide that any of these savings are worth foregoing for the additional benefits that would accrue under the new circumstances, the new circumstances being a railroad on whatever route was chosen. That is then a decision for the government concerned. I do not think that is a thing we have to recommend.

MR. FOUKS: In other words, your position is that it is there, and you do not want necessarily to recommend it, but you want to credit it against the capital cost?

MR. BISHOP: That is right.

MR. FOUKS: What is the distance from Peace Point to the 5th meridian -- that is, on the proposed highway which has been started, as I understand it.

THE CHAIRMAN: From Peace Point along the highway, do you mean?

MR. FOUKS: Yes. I understand that has been started from Peace Point to the 5th meridian. It has been already accomplished or cleared.

THE CHAIRMAN: It has been cleared between the 5th meridian and Peace Point.

MR. FOUKS: Yes, I have not the transcript here but I seem to remember that the Honourable Mr. Taylor indicated that that road was in progress now,



and it was 50-50 split between the Road Resources Programme and the Province of Alberta, and it was going to be completed and a certain portion of it had been cleared already. That is as I understood it. I am just curious on this point, whether those 240 miles --whether this brief has credited the distance which has been covered already and cleared, and I want to know just to find out how accurate these figures are, my lord; that is all. It is fifty or sixty miles, at least. In that case I would say 25 per cent has been cleared. In other words, that figure of 240 miles would not be correct, I suggest, and also the \$50,000 per mile would not be correct, which means that the total would be out of balance. That is my only point.

THE CHAIRMAN: Do you think the figure of \$50,000 a mile is far out?

MR. FOUKS: I would not know, my lord. All I say is that if they are taking 240 miles, and if part of it has been cleared or accomplished, then that should be credited because that has already been wasted, subject to their suggestion here of the deferment.

THE CHAIRMAN: You are quite sure about the figure of \$50,000 per mile, are you, Mr. Grimble?

MR. GRIMBLE: The present Mackenzie Highway is running on the average about \$50,000 per mile, and, of course, that is rebuilding. It is mostly cleared,



but your clearing is not a big factor.

THE CHAIRMAN: That is the highway that is going to be built from Fort Vermilion to Peace Point?

MR. GRIMBLE: That is the road that The Honourable Mr. Taylor had in mind. Consequently, the figure of \$50,000 per mile would be low.

THE CHAIRMAN: He has in mind \$50,000 per mile to be expended for that highway from Fort Vermilion to Peace Point?

MR. GRIMBLE: He had in mind the Mackenzie Highway which is costing \$50,000 a mile with very little clearing, so \$50,000 is a low figure.

THE CHAIRMAN: And the clearing for fifty or sixty miles has already been done; is that so?

MR. GRIMBLE: That is right, yes.

THE CHAIRMAN: What does that cost per mile, do you know?

MR. GRIMBLE: That was done on a force account basis, and I do not know the figure. It is fairly heavy clearing in there. All I am saying is that \$50,000 a mile is probably a low figure because the clearing on the Mackenzie Highway was either done or it was very light. In other words, if all the clearing was done then \$50,000 a mile is close to being correct.

COMMISSIONER THOMSON: Are you referring to the new Mackenzie Highway or the old Mackenzie Highway? How much would the original highway cost?



MR. GRIMBLE: I do not know.

COMMISSIONER THOMSON: It would not cost nearly as much as \$50,000 a mile?

MR. GRIMBLE: No.

COMMISSIONER THOMSON: Would that be the new highway from High Level?

MR. GRIMBLE: That is what The Honourable Gordon Taylor said.

COMMISSIONER THOMSON: That is a four-lane highway?

MR. GRIMBLE: It is a two-lane highway with shoulders. All I can say is that \$50,000 a mile is probably low for this highway.

THE CHAIRMAN: Is there anything else?

COMMISSIONER THOMSON: I have just one more question concerning the saving of \$4 million. If you are not sure whether the road is going to be cut out, or not going to be cut out, do we add this \$4 million? Do we add this \$4,650,000 onto the savings when we are not sure they are going to go on with the road, or not? Is it fair to add it on? That is the only thing I am interested in. Is it a figure of saving, or not? If we do not know whether the road is going through, or not, then we do not know if it is a saving, or not.

MR. BISHOP: Mr. Grimble asked if you are referring to the first version of the ---

COMMISSIONER THOMSON: I believe I have



the first version. I did not get the second.

MR. BISHOP: I think you have all your notes on the first one.

COMMISSIONER THOMSON: What is the figure?

MR. BISHOP: To answer your question, all of the items we have referred to we felt should be added to the list, and if there are outside factors, which I submit are in many cases beyond the scope of this Commission, which affect the decisions as to the spending of the moneys we have shown as savings, then it would be for the decision-making bodies to remove them from the list. In other words, what we are attempting to do is to say on this route these items could be saved; on this route these items could be saved. If the government to whom your report is submitted says: "This could be saved but we do not want to save this and we do not want to save that", then they could put them back and it might affect their ultimate decision, but we feel that those are items or costs which should be available on the list to be removed if they are to be removed by political decision.

THE CHAIRMAN: Mr. Bishop, you said something a few moments ago about how much might be saved by going one way and how much might be saved by going another way. Are you purporting to show here the savings that would be effected if the railway was to be built along the western route?



MR. BISHOP: I think we have done our best to cover that, my lord. These, of course, are comparative in both cases. Naturally, the building of a railroad under present circumstances is not a saving, but ---

THE CHAIRMAN: It did not include anything about saving the cost of a railroad from Pine Point on to Hay River, which is something that has certainly been considered very seriously if the railway is to go along the eastern route.

MR. BISHOP: This takes us back to the first comparison, and maybe this was not developed sufficiently, that what we are considering is a railway to serve Pine Point and to give a transshipment point for water transportation which will not have to cross any portage on the western route.

THE CHAIRMAN: We will not go into the argument as to why you have been doing this. I presume you have been presenting an argument, putting forth in the best possible light everything concerning the eastern route, and everything in the worst possible light concerning the western route?

MR. BISHOP: Well ---

THE CHAIRMAN: You are advocating the eastern route, and it is a case of giving us every argument you can in favour of the eastern route, and every argument you can against the western route.

MR. BISHOP: That is right, but we have



attempted to follow the counter-arguments for the western route as we went along. Now, Hay River as a settlement naturally deserves consideration.

THE CHAIRMAN: Mr. Bishop, that is what I have suggested, and Mr. Fouks is doing the reverse; he is putting up all the arguments he can for the western route, and doing all he can to destroy your arguments for the eastern route. Is not that the situation?

MR. FOUKS: That is so, my lord.

MR. BISHOP: Did you wish me to proceed---

THE CHAIRMAN: I just wanted to clear things up because I had assumed this was argument to a very great extent. We have established this, have we not, that if the railway were to be built along the western route then access would be given to Hay River?

MR. BISHOP: That is right, my lord.

THE CHAIRMAN: If you are going to get access to Hay River from Pine Point by rail the capital cost of building that line would be greater than the capital cost you are suggesting for the eastern route?

MR. BISHOP: That is right, my lord, but, you see ---

THE CHAIRMAN: I take it your argument is that it is not necessary to go to Hay River?

MR. BISHOP: That is right. We are



treating Hay River as an extra because the route we propose provides access to Pine Point and access to the water and Hay River. Although it would be, undoubtedly, desirable for the people in Hay River to have a railway they do have access by highway, and we feel that the question of whether they should be given rail access is worth the extra millions of dollars, or whatever that turns out to be. It is an entirely different question. We have balanced the benefit to the people in Hay River to a certain extent against the benefit to the people in Fort Smith, bearing in mind that the people in Hay River already have highway access whereas the people in Fort Smith do not. In other words, while each route provides what we consider the minimum essential services -- that is, to Pine Point and water access -- each one bypasses certain, and undoubtedly deserving, places that would benefit by the other route. Hay River loses out if the eastern route without the extension is built. Fort Smith loses out if the western route is built. That is the reason why we have not included the cost of a spur from Pine Point to Hay River in this table.

THE CHAIRMAN: Well, have we finished with page 4?

MR. FOUKS: Yes, my lord.

THE CHAIRMAN: We will go on now to page 5.

MR. FOUKS: Is there any conclusion from page 4, my lord?



THE CHAIRMAN: I beg your pardon?

MR. FOUKS: Is there any conclusion that can be drawn from page 4?

THE CHAIRMAN: Are you asking what conclusions we have drawn?

MR. FOUKS: No. Is there any conclusion -- I find it difficult to pinpoint it, somehow. Maybe it is the way it has been presented, or maybe it is myself.

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MR. BISHOP: Mr. Chairman, at the risk of being slightly facetious, may I suggest that the decision as to the saving referred to on page 4 should be made by the Government of Alberta rather than by the Government of British Columbia.

MR. FOUKS: I don't mind the remark because, frankly, I know the sense in which it is made, but, with the greatest respect, I suggest that this Commission will report to the Federal Government and that is where the decision will be made.

THE CHAIRMAN: Have you any comments on page 4? We go on to page 5.

COMMISSIONER THOMSON: Yes. On page 5 you say the Northwest Communications system are putting in a right-of-way. I thought the Alberta Government was putting a communication system along the Mackenzie Highway. Are there two systems?

MR. GRIMBLE: Yes, one complements the other. The Northwest Communications will take over from Hay River.

COMMISSIONER THOMSON: Where is the right-of-way being cleared from, then?

MR. GRIMBLE: It is supposed to take over from the A.G.T. at Hay River and give communications to Pine Point and Fort Smith, Uranium City, Fort Chipewyan.

COMMISSIONER THOMSON: You are sure that the Northwest Communications system - is that just a



supposition or are they committed to that?

MR. GRIMBLE: They have made a study and as of three months ago that was their plan.

THE CHAIRMAN: Have they publicly announced this?

MR. GRIMBLE: I haven't heard any public announcements, but I have discussed it with them and they have a report submitted.

COMMISSIONER GAINER: This land line is going in regardless of the railroad?

MR. GRIMBLE: They made this study independent of the railway.

THE CHAIRMAN: You are sure that this is a plan that you are assured is going to be carried out.

MR. GRIMBLE: Yes. They have a plan in the first two years for a land line to Hay River and to go from Hay River and serve Fort Chipewyan and Uranium City.

THE CHAIRMAN: A decision has made to go ahead and complete it?

MR. GRIMBLE: Yes, although ways and means are still vacillating and some changes are made. One of the changes that is planned is the fact that there will be a hydro line from Fort Smith to Uranium City. So as developments take place their plans are being reconsidered, but at the time three months ago when I discussed this with them they had a report submitted and they had their minds made up what they were going to



do.

COMMISSIONER THOMSON: Is there a land line from Pine Point to Hay River?

MR. GRIMBLE: No cost of this construction has taken place. They plan two years from now to serve these points.

COMMISSIONER THOMSON: Peace Point and Pine Point.

MR. GRIMBLE: Peace Point wasn't on their schedule; Fort Chipewyan was. They had planned to serve Fort Chipewyan.

THE CHAIRMAN: Anything else? Page 6.
Any questions on page 6?

COMMISSIONER THOMSON: Yes, on page 6.
Just what connection is there between an airport at Hay River and a railway? They are going to build an airport there, in any event.

MR. GRIMBLE: Yes. We have allowed for that. We show that type of airport they would require to serve Hay River. We have allowed \$500,000, whereas an airport which would serve the north on an end of steel basis would be a considerably different type of airport.

THE CHAIRMAN: Anything more? Page 7?

COMMISSIONER GAINER: I wasn't quite perhaps clear - additional harbour facilities at Hay River. This would be for trans-shipment purposes.

MR. GRIMBLE: Yes, sir.



COMMISSIONER GAINER: From rail to water.

MR. GRIMBLE: Yes, that is right, sir. The present facilities in use now are from truck to water, but the traffic would be doubled and this would be expanded.

COMMISSIONER GAINER: This is over and above which you would figure on the other route, Peace Point and Bell Rock.

MR. GRIMBLE: You will notice item number 1 in the next section deals with that.

THE CHAIRMAN: You didn't mention anything about harbour facilities at Bell Rock Harbour. Are they in satisfactory shape to handle everything that would be there?

MR. GRIMBLE: They have a good harbour there. I think it is 360 feet of wharfage, and they are using two of the loading ramps out of three.

THE CHAIRMAN: You are assuming that no additional harbour facilities would be required at Bell Rock Harbour.

MR. GRIMBLE: That is right, sir.

THE CHAIRMAN: Anything on page 8?

MR. FOUKS: I am just wondering if there were any dredging problems at Point Brule?

THE CHAIRMAN: Do you know about that, Mr. Grimble?

MR. GRIMBLE: Yes. Point Bruele is



shown on the big map number 52 L. Actually the point selected as adjacent to the railway location is Mile 107 on the water, probably Mile 105 by rail. But with Mile 107 on water there is approximately 10 miles of water which would require some dredging. From Embarrass Airport, Mile 118, to the mouth they have no dredging problems other than at the mouth itself, and this is where they dredged in the last two years this new channel.

MR. FOUKS: Would those dredging problems

MR. GRIMBLE: The dredging problem would be reduced considerably by going from Mile 107. Most of the dredging in the last two years has been from Mile 107. There is a 3-mile spur into Mile 107.

THE CHAIRMAN: You haven't made allowance for that.

MR. GRIMBLE: No. We have said to construct additional wharfage facilities at Peace Point or Point Brule, with the thought that actually it would be constructed at Peace Point, but there is this other possibility of Point Brule.

THE CHAIRMAN: You think it is one or the other?

MR. GRIMBLE: Yes.

THE CHAIRMAN: It wouldn't be at both.

MR. GRIMBLE: No, it wouldn't be at both. It would probably be a railway division.



MR. FOUKS: Why Point Brule, may I ask?

MR. GRIMBLE: Point Brule would involve no extra mileage to traffic moving from Edmonton to Uranium City. The dredging problem would be eliminated and there would be no extra mileage involved in moving by water to Uranium City. You would be exchanging 105 miles of rail haul for 107 miles of rail haul.

COMMISSIONER THOMSON: Has it changed in favour of one or the other, or do you want them both on the eastern route. This is a new introduction. You are dropping Peace Point altogether now, or am I right?

MR. GRIMBLE: No. What it really amounts to is that this is a matter of detail, detailed study, at the time of construction, and there are a lot of factors which will have to be taken into consideration, whether the railways will want a spur into Point Brule. On a practical basis the railways would rather not have that spur and use their terminal facilities at Peace Point. Also there may be factors involved in the power project. This is a matter of detailed study.

MR. FOUKS: Those details could change the figures.

MR. GRIMBLE: No.

MR. FOUKS: If you had to go into Point Brule with a short siding, would that add costs to



it?

MR. GRIMBLE: Yes, it may, but it is mainly a decision of the railway.

MR. FOUKS: Have you considered that as a cost factor?

MR. GRIMBLE: You can't consider both; you have to consider one or the other.

MR. FOUKS: Even if the railways thought it was tactically correct to go to Point Bruele they would not then go into Bell Rock.

MR. GRIMBLE: No, Peace Point.

MR. FOUKS: They would not go into Bell Rock.

MR. GRIMBLE: Peace Point.

MR. FOUKS: On your sheet number 1 you have 20 miles of spur line to Bell Rock.

MR. GRIMBLE: Yes.

MR. FOUKS: We are assuming that will take place regardless.

MR. GRIMBLE: That doesn't enter into it at all.

MR. FOUKS: Let's say the railroad decides to go into Brule; would they have that regardless?

MR. GRIMBLE: It is a case of whether they go to Point Brule or Peace Point or trans-shipment.

MR. FOUKS: They wouldn't go to both.

MR. GRIMBLE: No, they wouldn't go to both.



MR. FOUKS: I can't understand the introduction of Point Brule at this point. I couldn't just grasp it, to be honest.

MR. GRIMBLE: Well, it is an alternative.

MR. FOUKS: I would like to know why you enter into this alternative at this point, if it is irrelevant, Mr. Chairman.

THE CHAIRMAN: I don't know that it is very relevant. It seems to me that it is pretty clear. It is the question of harbour facilities somewhere to take goods over to Uranium City, and there are two places where it can be taken, one at Peace Point and the other at Brule. If it goes to either one, some harbour facilities will have to be built, and Mr. Grimble has estimated \$100,000.

MR. FOUKS: There may be other points also where wharfage may be built. Waterways is a third point. Now, if Brule has been brought up at this point, there must be a reason for it, I submit, and the question also becomes relevant why it was brought up at this point after three weeks of information with respect to Peace Point.

THE CHAIRMAN: I think it may be perhaps appropriate for you, Mr. Fouks, to put in your rebuttal or supplementary brief other points, if you think of any. Mr. Grimble is telling us what route he thinks and you can do likewise.

MR. GRIMBLE: We were considering harbour



facilities and estimating costs, and we put in the two alternatives which presented themselves. As far as we know, these are the only two we consider for trans-shipment to Uranium City; we point out that this would be a factor.

COMMISSIONER THOMSON: The railways haven't mentioned Point Brule in their brief.

MR. GRIMBLE: No, sir, I don't think they did.

COMMISSIONER THOMSON: And you have never mentioned Point Brule at any time before.

MR. GRIMBLE: No, sir.

COMMISSIONER THOMSON: It would be a good place.

MR. GRIMBLE: It has points, such as this dredging from here to Embarrass Airport, 10 miles of dredging, which might not be too big a problem, 10 miles, in comparison to 107 miles.

COMMISSIONER THOMSON: Could you not go further down still?

MR. GRIMBLE: We considered that and we considered the extra mileage of railway, and it was better to dredge an extra 10 miles than build another mile of railway. It is better to do maintenance rather than have capital expenditure.

COMMISSIONER THOMSON: You think it is better to dredge 10 miles than build a mile of railway.



MR. GRIMBLE: Yes, in that neighbourhood.
This is a matter of detailed investigation also.

MR. FOUKS: As to the cost of shipment from
Bru le as against Peace Point to Uranium City, which
would be the cheaper?

MR. GRIMBLE: There would be probably no
extra cost for trans-shipment over the present set-
up.

MR. FOUKS: Compared to Peace Point, which
would be the cheaper transportation cost?

MR. GRIMBLE: It would depend on the rate
of structure.



COMMISSIONER THOMSON: You are not contemplating building a harbour at Ile du Mort at all, are you?

MR. GRIMBLE: We did not introduce it.

COMMISSIONER THOMSON: You are not considering the building of a harbour at Ile du Mort. There is nothing in this brief about it.

MR. GRIMBLE: We said it was common to both routes, if you do as the railways did. The railways took truck routes to Pine Point and a harbour at Ile du Mort, and they compared two things which were comparable. We have merely left out that spur and are now comparing two things which are comparable, both serving the north and the Mackenzie River, and both serving Pine Point.

THE CHAIRMAN: Is there anything else in regard to page 8? Page 9? Is there any discussion on page 9? We will go on to page 10, then.

MR. FOUKS: On page 9 Waterways to Pine Point and Bell Rock is given as 405 miles, and we gave it as 415 miles. We do not consider it very significant, the difference being 55 miles and not 65 miles. The difference is not great, but I thought we might mention it.

THE CHAIRMAN: Fifty-eight miles?

MR. FOUKS: Yes.

MR. GUEST: I offered an exhibit last week in which there was a difference in the mileage from



Grimshaw to Hay River. In the exhibit I have a mileage of 710, which was wrong. It is wrong because I estimated the mileage -- Major Charles estimated his mileage from the cutoff point to Hay River as 55 miles above Alexandra Falls, and took it north of Alexandra Falls instead of south, so I made a mistake there. I was picked up on this by Mr. McGrath who said the mileage was 730 because it was 334 miles to Grimshaw and 395 miles to Hay River, so it is approximately 729 miles. Major Charles takes the railway not at Grimshaw but at Mile 327 which is east of Grimshaw, so we have to deduct from 729 miles about 7 miles which makes it 722 miles which, so far as this exhibit is concerned -- I have not got the number of this exhibit marked on it, but it deals with the current rates from Edmonton to Yellowknife, and the future rates from Edmonton to Yellowknife. It just makes the rate structure that I dealt with correct, and not incorrect. It is only a matter of 5 cents per hundred, or \$1 a ton, and it is not very important, but on the basis of Major Charles' figures the distance is 722 miles.

THE CHAIRMAN: Yes. Could you find out before tomorrow morning what the number of that exhibit is so that we can make a note on it, and correct that situation. What happened is that we have been assuming that the railway goes from Grimshaw.



MR. GUEST: That is right, whereas it starts 7 miles east of Grimshaw, so we will have to take 7 miles off these figures.

THE CHAIRMAN: Page 10?

COMMISSIONER THOMSON: Yes, on page 10 you say you have one extra engine in service full-time at Peace River. That is because of the ---

MR. GRIMBLE: It is because of the pusher required.

COMMISSIONER THOMSON: In other words, the grade there is something in the nature of 2.4, is it?

MR. GRIMBLE: That is right, 2.4.

COMMISSIONER THOMSON: Is there not a 2 per cent grade near Waterways at some place, too?

MR. GRIMBLE: Right at Waterways -- near Waterways there is a 2 per cent grade for a short distance against southbound traffic, but as Mr. Cooper explained it is right near their terminal and it does not present the problems that it does at Peace River hill.

COMMISSIONER THOMSON: Besides that your controlling grade from Peace River to Edmonton is about five-tenths; is that right?

MR. GRIMBLE: Yes.

COMMISSIONER THOMSON: And then your controlling grade from McMurray or Waterways to Edmonton is one per cent; is that right?

MR. GRIMBLE: I am not sure.



COMMISSIONER THOMSON: I think that is the railway's figure. Maybe Mr. Gordon can tell us.

MR. GORDON: What was the question, sir?

COMMISSIONER THOMSON: I say the controlling grade from Peace River to Edmonton is .5 per cent.

MR. GORDON: I am not sure. I am not an operating man; I am a freight traffic man, and I am not too familiar with the operating statistics on that. I know that there is a very hard and very steep grade at Peace River down both ways which would be the controlling grade on that section of line. There is also a rather heavy grade at Waterways, but as Mr. Grimble pointed out it is right at the terminal and it is not as critical a factor because of the switching. They have the equipment right there available at Waterways to help on the grade. Also, it is not so long, and it would not require nearly the power as at ---

COMMISSIONER THOMSON: I am not a rail-roader, but supposing you did have a controlling grade from Peace River to Edmonton of .5 per cent whereas from Waterways to Edmonton you have a one per cent grade, cannot you pull twice the load from Peace River -- or am I wrong?

MR. GRIMBLE: What it would amount to is that from Waterways to Pine Point and from Grimshaw to Pine Point would probably control the size of the trains starting out, except for this pushing



arrangement at Peace River hill. That would be a factor.

COMMISSIONER THOMSON: It is a one per cent grade as against a .5 per cent grade. Would you not have a cheaper operation on the .5 per cent grade?

MR. GRIMBLE: As long as you did not have to put an extra engine on it would not be appreciable. If you started out from Pine Point with a train, that would govern your power. If the power could handle this that would be your factor all the way through.

COMMISSIONER THOMSON: You still have not answered my question. Would a grade of .5 per cent not be more economical in regard to railway operations than a grade of one per cent?

MR. GRIMBLE: The less the grade the better, but your trains start out from Pine Point to Waterways, and from Pine Point to Grimshaw, and this would probably determine the size of your trains that you make up. Your power would be either one diesel or two diesels. You would probably make up trains for a one-diesel unit, and that is what they would use all the way through.

THE CHAIRMAN: Assuming the grade to be easier from Peace River in to Edmonton, as Mr. Thomson has been suggesting, it would be possible for the train to pick up quite a few extra cars at the top of the Peace River valley?

MR. GRIMBLE: Possibly it could pick up



cars at Maclellan and pull them in, yes, sir. Yes, that might be a factor in it.

THE CHAIRMAN: Yes, and that goes to some economies in operation, does it not?

MR. GRIMBLE: Yes, although this heavy ore movement from Pine Point is probably the biggest controlling factor on the line, and the grade from Waterways to Pine Point will control the makeup of the trains they have coming through.

THE CHAIRMAN: What was the grade that Major Charles estimated through Waterways and Pine Point?

MR. GRIMBLE: He had in mind a .75 per cent grade, and a compensated grade on both routes.

THE CHAIRMAN: .75, and then from Waterways to Edmonton there is a difference, is there?

MR. GRIMBLE: There is a 2 per cent grade on the hill, and I do not know how many points more than .75 from Waterways to Edmonton.

THE CHAIRMAN: The hill at Waterways is the same as the hill at Peace River?

MR. GRIMBLE: It is 2 per cent, and the hill at Peace River is 2.4 per cent. The main difference is in the length, I guess, and the location.

THE CHAIRMAN: You can get a run at the Waterways hill?

MR. GRIMBLE: Yes, and it is near the terminal. It is only against one-way directional traffic whereas the other one is against both directions



of traffic.

THE CHAIRMAN: The Waterways hill is 2 per cent, and the Peace River hill is 2.4 per cent, is it?

MR. GRIMBLE: Yes, sir, that is right.

THE CHAIRMAN: But from outside that Peace River hill it is only .5 per cent?

MR. GRIMBLE: Yes.

THE CHAIRMAN: But from Waterways into Edmonton it is one per cent?

MR. GRIMBLE: I do not know that figure at all. I will have to check that with the NAR, and see how many splits there are. There may be short sections in which you can run it. You can overload a diesel unit for fifteen minutes. You can actually put a 100 per cent overload on it for fifteen minutes if you can get a run at it. In that case these short sections of one per cent may not be a serious factor.

THE CHAIRMAN: It is something to be considered, though, is it not?

MR. GRIMBLE: It would not be difficult to check that, sir.

THE CHAIRMAN: Is there anything else in regard to page 10? Page 11? We have covered page 11 already, have we not?

MR. GRIMBLE: I think so.

THE CHAIRMAN: Page 11 deals with the one



extra terminal assuming there would be that extra terminal required. Page 12? Page 12 is just a further consideration, is it not, of one of the earlier pages, namely, page 4?

MR. GRIMBLE: That is right, they are the same considerations.

MR. FOUKS: There is a comment I might have, my lord, and that is I find it difficult to understand how you can save something on something you have not got.

THE CHAIRMAN: Page 13?

MR. FOUKS: I suggest the same principle applies, my lord.

MR. BISHOP: Mr. Chairman, we should point out that in page 12, as was the case of page 4, the operating costs saving, being the money we do not have to spend to maintain something we have not got, only lasts for ten years and not twenty years, because we are assuming a ten-year deferment. This is not an interest charge.

THE CHAIRMAN: Page 14? You were going to get us, Mr. Grimble, all the costs that you estimated would be saved if navigation was discontinued from Waterways into Lake Athabasca. Is that what you set out on page 14?

MR. GRIMBLE: No, sir, that is further on in page 22.

THE CHAIRMAN: So we should look at pages



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14 and 22 together, should we?

MR. GRIMBLE: We could do that, sir, yes.



THE CHAIRMAN: Is this assuming that all navigational aids will be discontinued from Waterways north or only that navigation which takes place in low water?

MR. GRIMBLE: Only the navigation in high water would remain and no dredging would be required.

THE CHAIRMAN: Where do we get these figures for this?

MR. GRIMBLE: On page 22?

THE CHAIRMAN: No, page 14.

MR. GRIMBLE: These are the figures we gave you some time ago; I think it was put in as an exhibit. It is \$153,000, and then these others are estimated.

THE CHAIRMAN: The dredging was \$153,000 in 1957.

MR. GRIMBLE: Yes. That is maintenance of equipment and two dredges. As long as they are operating the two dredges it would be in that order, and operating the same amount of overtime they have in the past.

THE CHAIRMAN: What about the navigational aids?

MR. GRIMBLE: They would be eliminated on the Athabasca if it was only high water navigation.

MR. FOUKS: I wonder if Mr. Grimble has the 1955, 1956 and 1958 figures.

MR. GRIMBLE: Not 1958.



MR. FOUKS: 1955 and 1956?

MR. GRIMBLE: I have those, yes.

MR. FOUKS: Could we have those?

MR. GRIMBLE: They are in an exhibit which we put in.

THE CHAIRMAN: They are already in evidence?

MR. GRIMBLE: Yes, they are already in evidence. I may add that in 1956 and 1957 they changed their policy of operating the dredges and allowed the dredges to operate more freely and possibly operate more overtime. The figures in the last two or three years of dredging have been of this order.

COMMISSIONER THOMSON: You mean 1957 wouldn't be a good average year; is that it?

MR. GRIMBLE: No, I think it would be a good average year, in the present way of operating. 1958 was also higher.

THE CHAIRMAN: Page 14. Page 15? Page 15 is worked out on the assumption that the Spokane rates will be in effect.

MR. GRIMBLE: Yes. This is directly out of Swanson's Lumber Company brief and also confirmed by Mr. Denney.

THE CHAIRMAN: But based on the fact that the Spokane rates will be in effect.

MR. GRIMBLE: The \$9.00 would still be in effect. The \$9.00 - what we should say is that the



\$9.00 is really a low figure for the saving.

THE CHAIRMAN: That is Swanson's hope.

MR. GRIMBLE: The handling cost is so high that even with an arbitrary cost this would be effective.

THE CHAIRMAN: Even with the Spokane rate plus an arbitrary.

MR. GRIMBLE: Yes, sir.

MR. GUEST: The arbitrary to the United States - when we are referring to the group rates, so-called Spokane rates, we are referring to lumber into the United States. If we move into the Prairie Provinces the arbitraries are much higher. This is off the P.G.E.: the rate from Prince George to Toronto is \$1.52; the rate from Kelly Lake is \$1.72.

THE CHAIRMAN: The arbitrary is 20 cents there.

MR. GUEST: Yes, 20 cents. If you take a point to the prairies, Regina, the rate from Prince George, which is the same as Grimshaw or Waterways, 1.01, goes up to 1.38. That is the highest arbitrary. But they vary. The point is that the arbitraries to the United States are usually lower. The highest arbitrary on the P.G.E. is 8 cents. That is quite a reasonable arbitrary. They range from, depending on the mileage, $2\frac{1}{2}$ cents to 8 cents, but when we come to domestic rates in Canada, then they go up considerably and the saving might not be so much as an operator in Waterways might consider if he is looking at the



international rates, American rates to the United States.

MR. BISHOP: Mr. Chairman, could Mr. Gordon speak on that for a moment?

THE CHAIRMAN: Yes.

MR. GORDON: Mr. Chairman, the system of assessing arbitraries is usually done where there are two or more railways involved in the haul, and, generally speaking, the arbitrary is where one railway is not a party to a through rate. In assessing that through rate they add an arbitrary figure. Taking the Canadian National or Canadian Pacific Railways, they do not use a system of arbitraries, they use a system of increments. I made a study on the lumber rates to eastern Canada from various points on the prairie provinces some time ago, and I found the incremental mileage on Canadian railways on lumber haul from Alberta point and eastern British Columbia points to Toronto, Montreal, Windsor area was about 20 cents per 100 miles. Now, when we got on to the P.G.E. line then there was an arbitrary of 100 cents over the Prince George rates. So assuming that we are going to have an arbitrary up there, we could be just as much wrong as assuming that we could have a straight incremental mileage, and if we had a straight incremental mileage there would be a difference to Peace Point of about 4 cents per hundred weight, or about 80 cents a ton. So I think, on the basis of



those estimates, that the estimate of saving in this lumber movement is rather on the conservative side. Of course, there is a possibility that on new construction the railways might say they don't feel they can put their regular incremental mileage on there, but my bet is that they would.

THE CHAIRMAN: What is the basis of that opinion?

MR. GORDON: I assume that if this railway were built it will be built as an extension of the Northern Railways system and then will become a part of the trans-continental railway system and on their rates. In setting lumber rates - -

THE CHAIRMAN: There were some construction rates applied at that time.

MR. GORDON: There were construction rates from Lac la Biche to Waterways up to about 1948 - the hearing was held in 1947 - and at that time the Board of Transport Commissioners ruled that there was no logical reason for that construction rate being maintained. Now, provided it were contained and provided the normal incremental mileage was the 2 cents per hundred weight on lumber, and assuming that some increment would be made for construction rates, it would amount to about 25 per cent for construction purposes. It is not significant on a long haul; it is on a short haul. In later years the railways have not, as a general practice, put construction rate on



new construction. For instance, on the Lynn Lake line there are no construction rates on normal traffic; it moved at the same rate as any other system.

COMMISSIONER GAINER: Does it matter whether we call it an arbitrary or an incremental mileage rate?

MR. GORDON: No. Where you have an arbitrary it is usually higher, and that is why they call it an arbitrary.

COMMISSIONER GAINER: Would the arbitrary rate be different even in the long haul?

MR. GORDON: Yes, there is a difference. As a matter of fact, the incremental mileage on Canadian hauls is usually considerably more than on the United States hauls, because the United States hauls are based on an equalization with the Oregon, Washington and Idaho lumber rate. It is simply a matter of what the particular railway wants to add, and the arbitrary that the P.G.E. assesses, I would assume - I know they used to be; I haven't had much to do with it for some years - but that was the P.G.E. charge and that is what they said they wanted for hauling lumber, and they couldn't make a division so they just added something to the Vancouver rate.

COMMISSIONER GAINER: You have worked out an increment for Windsor, Toronto and Montreal?

MR. GORDON: Yes; approximately 2 cents per 100 miles, 2 cents per hundred weight.



COMMISSIONER GAINER: What would be the United States rate?

MR. GORDON: I don't know at the moment. I have that in my office. But I know they are in very much larger groups and the increment would be considerably less than that. But I wouldn't like to set a figure without working out a rate. But their groupings are very much larger than the Canadian groupings.

THE CHAIRMAN: Any more questions on page 15?

MR. GUEST: May I say a word about arbitraries? Arbitraries can be set by any railway; they don't require two railways to place an arbitrary. If they want to set one for a particular reason, they can set one. If you ship into eastern Quebec and the Maritimes, you work on the basis of arbitraries and it has nothing to do with two railways. If I happened to be involved in the course of changing an arbitrary on the P.G.E., as I happened to do a little while ago, P.G.E. can't change an arbitrary, it has to be with the concurrence of the other carriers in Canada, Canadian National, Canadian Pacific, and it is rather difficult to make changes in rates or arbitraries. I think what Mr. Gordon said is reasonably correct for eastern Canada and that is the difference in rate is less than what it is, for example, in the prairie provinces. The rate from Kamloops to Regina is 1.11, and the rate from Vancouver to Regina



is 1.30, a 19 cent difference. Now, if you are going to Toronto, the difference is only 3 cents.

COMMISSIONER GAINER: In any event, it isn't likely to be different on one route from the other.

MR. GUEST: Well, this is on the C.N. or C.P. Now, sometimes they like to consider the Northern Alberta Railway as a fully-grown child, and sometimes it is tied pretty tightly to the strings of its foster parents.

COMMISSIONER GAINER: I wondered if the same proportion would be applied.

MR. GUEST: I am sure of that.

MR. FOUKS: I have one other comment. This indicates the savings to the lumber operators. I wonder if it also considers the stumpage fees based on the evidence we have before us. We had evidence earlier in the hearings that the stumpage fees were going to go up.



THE CHAIRMAN: I think Mr. Grimble had a special provision for that. That is an advantage to the government?

MR. FOUKS: That is an advantage. I thought it would be credited against this.

THE CHAIRMAN: Well, one will be considered in connection with the other.

MR. FOUKS: That is fine.

COMMISSIONER THOMSON: Have we a special figure for the savings to Uranium City in here, or is it just the sawmill? Are they a special case? I mean, are the lumber mill operators a special case? What about the savings to the mine operators, say, of Uranium City? Have you got that some place?

MR. GRIMBLE: That is later.

COMMISSIONER THOMSON: It is covered later?

MR. GRIMBLE: Yes, I think it will be covered later. Each of these are in separate items.

MR. FOUKS: I must be missing some sheets. I do not see the stumpage fees mentioned at any place else.

MR. GRIMBLE: Actually, they are covered later on the very last page. They are not mentioned, but they are included there.

MR. FOUKS: The extra fees? I may not have a complete sheet.

MR. FEEHAN: I have not a page 27.

MR. FOUKS: I do not see it on page 27; do



you, my lord?

MR. GRIMBLE: We can explain it when we get to page 27, if you like.

THE CHAIRMAN: Are we now through with page 15? Page 16? Page 17? Page 18? Page 19? Page 20?

MR. GUEST: On page 18 what is the rate of $1\frac{1}{2}$ cents per ton-mile? How is this arrived at? It is 58 miles, I think ---

MR. FOUKS: Sixty-four miles. We arrived at 59, do you remember ---

MR. GUEST: One and a half cents per ton-mile.

THE CHAIRMAN: I suppose you are assuming there the rate mentioned by Mr. Jewitt?

MR. GUEST: I just wondered if they took the national average which is $1\frac{1}{2}$ cents a ton-mile.

MR. GRIMBLE: We took a very low figure, actually.

MR. GUEST: Low?

MR. GRIMBLE: Yes, it could be 2 cents, probably, or 3 cents.

MR. GUEST: Or one cent?

MR. GRIMBLE: This is not ore. This is fuel and general freight. It could go up to 4 cents, or down to 2 cents.

MR. GUEST: Is this on page 18?

MR. GRIMBLE: No, 19.

MR. GUEST: I was looking at page 18.



MR. GRIMBLE: That is Mr. Jewitt's figure. He said he would like one cent, but it would be more likely to be one and a half cents.

COMMISSIONER THOMSON: Let us go back to page 17 for a moment, shall we? If you make this saving would you cut out the northern allowance?

MR. GRIMBLE: We did not deal with that, sir.

COMMISSIONER THOMSON: Well, you should. If you are going to save that much money do you not think you should cut out the northern allowance?

MR. GRIMBLE: It is an additional saving we had not thought of.

THE CHAIRMAN: Pages 17, 18 and 19 we have covered, have we not?

COMMISSIONER GAINER: I did not quite get the last of your comment. You have applied the general rate to the general freight, as to the ore, on the basis that this was what?

MR. GRIMBLE: That this was an average figure for oil and general freight.

COMMISSIONER GAINER: It is the average revenue figure for freight for all of Canada?

MR. GRIMBLE: Yes, sir.

THE CHAIRMAN: Page 20? Page 21?

COMMISSIONER GAINER: I will come back to page 15 for a minute with regard to lumber. Mr. Grimble, to get these things straight, does page 15 on lumber where we were discussing the 20 million



board feet -- this should be over and above the amount that would accrue on the west route?

MR. GRIMBLE: No, it is over and above what their arrangements are.

COMMISSIONER GAINER: But it takes no account of similar or -- not necessarily quantitatively, but the saving that might accrue to western lumber operators north of Grimshaw?

MR. GRIMBLE: That is on page 25, sir.

COMMISSIONER GAINER: I see.

THE CHAIRMAN: We have dealt with page 21, have we? Page 22? Do you want to go back to page 21?

MR. FOUKS: Yes, my lord. On page 21 the question of 10,000 tons per year at Fort Smith is mentioned. I am wondering whether that is a round figure, or whether that can be broken down.

MR. GRIMBLE: It fluctuates between nine thousand and twelve thousand over the last five years

MR. FOUKS: That is shipped by Northern Transportation?

MR. GRIMBLE: By all means.

MR. FOUKS: To Fort Smith?

MR. GRIMBLE: Yes.

MR. GUEST: Pardon me, my lord, but it goes by both routes. It goes around by Hay River, and there would not be much saving attached to that. It is by barge, I presume. We would have to deduct the



amount that was saved by barge to Hay River from this total, because this would not be affected by the railway at all.

MR. GRIMBLE: Actually, it would be affected. In the last few years it has been about 12,000 tons. Ten thousand tons is a round figure, but there would be a saving even on that movement because that is mainly oil which happened to be a movement of about 1,300 tons a year. This is oil that is trucked from Edmonton to Hay River -- or, alkalite -- and it is mixed with oil from Norman Wells and hauled down to Fort Smith, and this would be a much better movement from Edmonton right through to Fort Smith.

MR. GUEST: The Northern Transportation Company people informed us that that would be between 7,000 and 8,000 tons per year from Waterways to Fort Smith, which includes oil and gas.

MR. GRIMBLE: This is included here. They ship 700,000 gallons, and a million gallons in the last two years, to Fort Smith, but this is included in here, too.

THE CHAIRMAN: You are assuming that the freight rate on the railway will be \$10 a ton less than the present rates indicated on the water?

MR. GRIMBLE: On the average. These are round figures. It was 12,000 tons, and we took 10,000. The rate of \$10 a ton is a rough average figure, and that means \$100,000, which could be a few



thousand dollars either way.

THE CHAIRMAN: But in order to arrive at your figure you must assume that the freight rate by rail from Waterways to Fort Smith would be \$10 a ton less than the water rate?

MR. GRIMBLE: That is right.

THE CHAIRMAN: But it would be actually the same, would it not, because you would get away from the portage charges?

MR. GRIMBLE: Yes, it would be roughly \$10 a ton less. There are two handlings saved.

THE CHAIRMAN: Can you assume that, Mr. Grimble?

MR. GRIMBLE: We refer you to these graphs, and I think they show \$4 and \$9, and that is \$13 on your freight. They show \$13 on general freight, which is an added cost for handling; it is just the handling alone.

THE CHAIRMAN: My recollection of the evidence is that the cost of shipping freight from Edmonton to Waterways 300 miles is even now equal to the cost of getting it all the way from Waterways to Yellowknife. Now, you are going to take it by rail another 300 miles, and reduce the charges.

MR. GUEST: My lord, I have the tariffs here to quote from, and I think they will straighten it out. I think Mr. Grimble is correct when he is taking general merchandise. There should be a



reduction if we use Class 45 as general merchandise. There would be a reduction of \$10 a ton, but if we discuss petroleum then that is a horse of a different colour. The rate now from Waterways to Fort Smith is \$1.75. The rate by rail from -- that is, from Edmonton to Fort Smith the rate will be \$1.66, so you have a reduction of 8 cents a hundred, which is \$1.60 a ton for bulk petroleum products.

COMMISSIONER GAINER: Is that assuming an agreed charge?

MR. GUEST: No, I am assuming it moves as it does now at Class 45 rates. I am assuming that. There would not be an agreed charge unless you have a competitive situation in the picture somewhere, and it is very difficult to get it if you go on the eastern route.

COMMISSIONER GAINER: You think you would not have competition -- if you had competition on the water you would have those between Waterways and Fort Smith?

MR. GUEST: We have competition on the water between Waterways and Fort Smith. The present rate is 75 cents, and the combination is \$1.74. The railway can do it at \$1.66, so the water would have to come down to compete with the rail.

COMMISSIONER GAINER: And if it did the rail could go down to agreed charges?

MR. GUEST: They could, but, of course, that is something they do not want. That is why they do not want any competition. On the tonnage this way



there is a saving of \$1.60, but on the other way there is \$10 -- as a matter of fact, I would put it at \$11 ---

THE CHAIRMAN: But that is only assuming the regular freight rate at Class 45?

MR. GUEST: Assuming this average for general merchandise between Class 40 and Class 55; assuming this is the average -- of course, it would vary up and down, but most of it we have assumed is going at Class 45, the general merchandise rate. Having regard to that we would actually have to cut Mr. Grimble's figures down a little bit.



COMMISSIONER GAINER: It was 400,000 tons a year; let's say about 40 per cent of the total - at least the average.

MR. GRIMBLE: It would be between 10,000 and 12,000.

MR. GUEST: We would save about \$6,000 on the petroleum and on the other 4,000 tons we would save \$44,000, for a total of \$50,000 on the movement from Edmonton to Fort Smith, which is a nice saving.

THE CHAIRMAN: While it is a nice saving to the people of Fort Smith, does this not follow, that you are now suggesting that that freight go from Waterways to Fort Smith by the proposed government railway which will carry it at a loss?

MR. GUEST: It won't carry it at a loss from the point of view of moving this particular freight at class 44.

THE CHAIRMAN: Your rate per ton mile - what would it be from Waterways to Fort Smith?

MR. GUEST: It is \$1.66, the 300 miles.

MR. GRIMBLE: 3.6 cents per ton mile plus the handling.

THE CHAIRMAN: 3.6 cents from Waterways to Fort Smith.

MR. GRIMBLE: The handling is taken care of; it would be 3.6 cents per ton mile.

MR. GUEST: I am not sure of this.

The rates don't progress at the same rate, but know-



ing the rate and knowing the distance, it is quite easy to figure out the rate per ton mile.

THE CHAIRMAN: You are assuming that all the water traffic that goes from Waterways up to Fort Smith will be discontinued.

MR. GUEST: I think this is the proposal.

THE CHAIRMAN: We must assume all of those things.

MR. GRIMBLE: It is quite a logical assumption.

COMMISSIONER GAINER: This \$1.60 petroleum saving would be the very least that would be saved, even in the absence of water competition.

MR. GUEST: This would automatically be saved if there was no water competition. The rail route would cut the water rate to Fort Smith on account of the portage. For example, if you stopped at Fort Fitzgerald, the rate is 50 cents, plus 99 cents, which would be \$1.49, while it is \$1.74 at Fort Smith, and the 25 cents is the cost of the portaging, \$5.00 a ton for petroleum products. I don't know - I think possibly the water might be able to compete; they run tank trucks with oil at far less than 25 cents 100 pounds. As a matter of fact, they could probably take another 10 cents per 100 pounds off that, possibly, but on the basis of that rate the rail rate will cut it by \$1.60.

COMMISSIONER GAINER: And in the event



of competition coming in it could be more than that, but we are sure it wouldn't be less than that, no matter what happened.

MR. GUEST: Yes. If a highway could be built parallel to the route, then tremendous costs would be saved.

COMMISSIONER GAINER: Are you saying that the railroad built from Waterways would carry freight at a great deal less?

MR. GUEST: That is according to the present tariffs. They ship their oil north of Fort Smith, or gas, petroleum products, and via Hay River.

MR. GORDON: Mr. Chairman, just for the information of the Commission, I would like to point out that it would be possible for the Northern Alberta Railways to quote an agreed charge on petroleum products there. They have quoted charges on the Hudson's Bay line where no highway or other competition exists simply because of the fact that it is cheaper to get it in there using a combination.

Now, with regard to Fort Smith, we have the situation where we would have highway competition as far as Lac la Biche, and we have water competition from Waterways beyond, and the railways could issue an agreed charge to meet that - -

MR. GUEST: Why don't they?

MR. GORDON: They are getting around to doing these things the way a lot of them are.



THE CHAIRMAN: Do you think it is relevant, Mr. Gordon, what they might do?

MR. GORDON: No. I just wanted to say that there is nothing to stop them.

MR. GUEST: There is a rate of 22 cents, and yet the rate to Waterways is \$1.07. The agreed charge to Lac la Biche has cut the rate to Waterways, but until there is competition the railways won't. But they will not put an agreed charge in or a competitive rate unless there is competition.

THE CHAIRMAN: It is ten minutes past five, gentlemen. Do you think it is time to adjourn?

We will adjourn until 10 o'clock tomorrow morning.

--- Adjournment.

ROYAL COMMISSION
ON
GREAT SLAVE LAKE RAILWAY

HEARINGS

HELD AT

VOLUME No.: 23 DATE: 02/29/57

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ROYAL COMMISSION ON
THE GREAT SLAVE LAKE RAILWAY

Hearings of the Royal Commission on
the Great Slave Lake Railway held
at the Court House, Edmonton, at
10.00 a.m., Thursday, October 29th,
1959

PRESENT:

MR. M. E. MANNING	Chairman
MR. WALTER D. GAINER	Member
MR. JOHN ANDERSON-THOMSON	Member

MR. FRANCIS M. FEEHAN	Counsel
MR. A. PATERSON	Secretary



---On resuming at 10.15 a.m.

THE CHAIRMAN: Gentlemen, we are now at page 22. Mr. Grimble, before you start on this, and just to avoid the risk of forgetting about it, I would like to ask you this question: You said the other day that you thought you might have some material on how much it would cost to build a canal and a lock around the Vermilion Chutes. Have you anything more on that?

MR. GRIMBLE: No, I have not. I made several inquiries from people I thought would know, and I got the answer I sort of expected, that they would want to make a reasonably detailed study of the site before they ventured a guess, and I am in the same position. I would not like to venture a guess.

THE CHAIRMAN: Could you give us the range? For instance, you know it would cost over \$100,000. What is the maximum that you might consider?

MR. GRIMBLE: I could not do even that. I talked to Harbours and Rivers, and everybody, and I could not get anybody who would give me even a range without making an on-the-site study so that they would not be embarrassed by it in the future.

THE CHAIRMAN: You said the other day you thought it would be somewhere in the order of half a million dollars, or less?

MR. GRIMBLE: Yes, but I would not like to



be quoted on that.

THE CHAIRMAN: Yes, you pointed that out. Let us take a figure like \$2 million. Can you say we might be reasonably sure of covering it with that, or are we again having to guess on that?

MR. GRIMBLE: I think half a million is closer than \$2 million.

THE CHAIRMAN: You do? Very well. Well, we are at page 22 now of Exhibit 52-000, are we not?

MR. GRIMBLE: You asked for some additional information regarding costs per mile, and we have typed out a page on that. Would you like to see this first?

THE CHAIRMAN: Yes.

MR. FEEHAN: Perhaps we could call this page 28 of Exhibit 52-000?

THE CHAIRMAN: Yes.

---(Sheet headed: "The Great Slave Lake Railway: construction cost estimate" added to Exhibit 52-000 as page 28.)

THE CHAIRMAN: Do you consider that the spur that might be built into Bell Rock Harbour would be built at almost a minimum of cost?

MR. GRIMBLE: It is very good ground there, sir.

THE CHAIRMAN: And the spur that would go from Enterprise to Hay River would be almost at maximum cost?



MR. GRIMBLE: These are Major Charles' figures. One thing we did not mention yesterday, of course, was the crossing of the west channel and the property acquisition, and so on, to get into a wharf. This may be another reason for his figure being the way it is. There is just one other question regarding these mileages. The highway mileage from Grimshaw to the border is 300 miles, and from there to the point where the junction is it is another 41 miles. I think the highway mileage would be about as short as it could be made considering they can go down these valleys with six per cent grades whereas the railway would have to go down with one per cent grades.

THE CHAIRMAN: What is that again?

MR. GRIMBLE: The highway to the border is 300 miles, and from the ---

THE CHAIRMAN: The highway to the border is 300 miles even?

MR. GRIMBLE: 300.45, actually.

THE CHAIRMAN: Yes?

MR. GRIMBLE: From the border to the junction, as we have shown, is approximately 40 miles.

THE CHAIRMAN: And from the junction to Pine Point?

MR. GRIMBLE: There is no highway there. These are highway mileages.

THE CHAIRMAN: How far is it from the junction to Pine Point?



MR. GRIMBLE: Seventy-five miles.

THE CHAIRMAN: That makes 415 miles?

MR. GRIMBLE: I am sorry. We are now mixing highway mileages and railway mileages.

THE CHAIRMAN: You should add something ---

MR. GRIMBLE: We should not extend beyond the highway mileages. It is 300 miles to the border, and when considering highway mileages we must remember that they can go down a hill and up again with six per cent grades, and consequently you should not be adding the two together.

COMMISSIONER THOMSON: If you look at the map, Mr. Grimble, you can see the jogs and windings of the highway. You would never put that many windings into a railway. The railway mileage would be shorter than the highway mileage.

MR. GRIMBLE: Of course, when it goes down into the valleys you have got more mileage.

COMMISSIONER THOMSON: You have not got that many valleys. We have only one which would not add any more than an extra five miles, would you not say?

MR. GRIMBLE: It depends on how deep the valley is.

COMMISSIONER THOMSON: Well, you know how deep those valleys are. There are none that deep which would add more than a mile?

MR. GRIMBLE: I doubt if it would be a



shorter mileage than the highway.

THE CHAIRMAN: There is nothing else that should be raised before we go on with page 22, is there?

MR. GRIMBLE: No.

THE CHAIRMAN: Are there any questions on page 22 that anybody would like to ask?

MR. FOUKS: I am just wondering if that takes into account the loss of investment at Waterways, or any installation expense at Point Brule or Peace Point.

MR. GRIMBLE: That has been dealt with on page 8. This is only the additional expenditure required, and it is taken into account ---

MR. FOUKS: This is the operating cost. I am wondering if the losses are included. That is an operating cost; one is a capital cost and the other is an operating cost. I am wondering if they have taken into account in the operating cost the loss on investment. One is an additional cost, and the other is a loss.

COMMISSIONER GAINER: You are wondering if capital losses have been accounted for on either page 8 or page 22?

MR. FOUKS: Yes.

MR. BISHOP: I do not think we still quite understand the question, Mr. Chairman. Is Mr. Fouks referring to the loss incurred by the discontinuing of use of installations already paid for?



MR. FOUKS: That is right, some installations. If they are not all discontinued, some will be.

THE CHAIRMAN: You have not calculated anything concerning the discontinuance of use of anything there?

MR. GRIMBLE: It will be used at high water, sir, so there would be no discontinuance.

MR. FOUKS: In other words, it is on the assumption that all facilities will be used to the same extent as they are now?

MR. GRIMBLE: Possibly not to the same extent. The slipways would be used in the winter, and the shops would be used for storage.

MR. FOUKS: I suggest that when you are calculating operating costs to the finality you are then the smallest degree of loss is a capital loss.

THE CHAIRMAN: Well, you will put that in your supplemental brief.

MR. FOUKS: Yes. In other words, as long as they will be operating to a lesser degree at Waterways then that is a capital loss, and also I might ask if that is included at Point Brule or Peace Point.

THE CHAIRMAN: Obviously it is not.

MR. FOUKS: It may be in their calculations but not shown.

MR. GRIMBLE: Fort Fitzgerald will not be



operated, and in lieu of that Peace Point will be operated.

THE CHAIRMAN: Does that clear that up?

Page 23? We have already dealt with page 23, have we not?

MR. GRIMBLE: Yes, sir.

THE CHAIRMAN: Pages 24 and 25 are all estimates, are they not?

MR. GRIMBLE: Yes, sir.

THE CHAIRMAN: Page 26?

MR. GUEST: I think these figures are not correct, my lord, but I do not know whether you want to bother to go into them. I would like to have Mr. Grimble break down the \$77,000. I would say it would be quite a bit higher than \$77,000.

THE CHAIRMAN: Why would you think it would be higher, Mr. Guest?

MR. GUEST: For example, Hay River is served by truck, and the rate there was \$2.58. If a railway went into Hay River from Grimshaw the rate would be \$1.86, which is a saving of 72 cents per 100 pounds or \$14.40 per ton. That is for general merchandise. Then, of course, there is oil. Now, it costs about \$1.50 per 100 pounds to ship oil to Hay River by truck now. With the railway at Hay River there would be a competitive factor. I am not suggesting what the competitive factor is going to be, but if it is comparable to the rate from Calgary to Dawson



Creek, as I pointed out last week, it would cut that in half, and that would be another 70 cents, or \$14 per ton, or for ten thousand tons it would be \$140,000. That is just about double the figure suggested here.

THE CHAIRMAN: It would be reasonable to say that your estimate is double the estimate made by Mr. Grimble?

MR. GUEST: Yes.

THE CHAIRMAN: And you have quoted your figures to show why you think that?

MR. GUEST: Yes.

THE CHAIRMAN: Would it be convenient for you to include that in your supplemental brief?

MR. FOUKS: Yes, my lord.

THE CHAIRMAN: Do you wish to add anything in the light of that?

MR. BISHOP: Could we ask Mr. Gordon to speak to that for the moment, particularly on this question as to what extent the presence of the parallel rail line can be expected to create lower freight truck rates?

MR. GORDON: Mr. Chairman, since the last adjournment and since Mr. Guest's presentation where he dealt with the matter of truck rates, and suggested that the trucks would be prepared to meet the competition of the railways, I did some research on the matter both through reading and various studies and in actual contact with transportation companies in



the trucking business. In my opinion, the truck rates presently charged to Grimshaw are just about as low as a truck operator can go. In referring to Transportation in Canada by Mr. J. C. Lessard -- and this is the study on transportation which was prepared for the Gordon Commission -- Mr. Lessard makes a calculation of truck operating costs for various years from 1928 to 1954, and figuring those on a ten to fifteen-ton gross weight vehicle, which is the type of vehicle generally used in the transportation of general merchandise, they would have a gross vehicle mile operating cost in 1954 of 35.6 cents per gross vehicle mile. In discussing that with transportation companies in the trucking business I was told that costs are up considerably. One estimate was as high as 25 per cent since that date. On a calculation based on figures from the trucking companies it is thought now that a basic minimum at which a trucking company can operate is about $37\frac{1}{2}$ cents per gross vehicle mile, and at the present time taking the rate to Yellowknife right through on general merchandise it is \$3.58 a hundredweight, and taking the same freight in by Waterways the through rate is \$2.72.

THE CHAIRMAN: Now, tell me what these two rates are. What is the first one?

MR. GORDON: Edmonton to Hay River, a truck-load at \$2.50 per hundredweight.

THE CHAIRMAN: By truck?



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MR. GORDON: Yes, it is \$2.50 per hundredweight. Hay River to Yellowknife by barge, Class 5, figuring a truckload rate, it would be 75 cents per hundredweight less 10 cents per hundredweight for quantities over 20,000 pounds, which makes 65 cents plus a handling charge of 35 cents, making a through rate of \$2.58 per hundredweight.



Now, on the Waterways route, Edmonton to Waterways, class 45, carload, we have \$1.07. These rates, I believe, are already on file. That is \$1.07. Waterways to Yellowknife, class 5, Northern Transportation, \$1.65, making a through rate of \$2.72, or a difference in favour of Waterways of 86 cents per hundred weight.

Now, in the year 1958, approximately 8,000 tons of freight was handled to Yellowknife via the Waterways route, most of it general merchandise, and the truckers did not attempt to meet that competition.

THE CHAIRMAN: 8,000 tons?

MR. GORDON: Approximately 8,000 tons.

If the carriers, the highway carriers were unable to meet the competition at \$2.72 as against \$3.58, it is inconceivable that they would be able to meet the competition of lower railway rates or a lower rail and water combination; they haven't met the competition when the rail-barge rate was hired. The present truck rate from Edmonton to Hay River is \$2.58, figuring a minimum of 20,000 pounds truck load, and realizing that this is essentially a one-way haul - there is very little traffic moves back - it gives the trucker a gross vehicle mile rate of 36.75 cents per gross vehicle mile, which is very close to what they figure their operating expense, their operating revenue will be on that. Now, if we take the rate



from Edmonton to Hay River, based on the rate of \$1.38 cents per hundred weight and a minimum 20,000 pound load, we get a gross revenue of \$376.00. Taking that figure and figuring it out again on the gross vehicle mile revenue, and figuring that the truck has to move both ways in order to handle that, it would net the trucks a gross vehicle mile rate of 26.82 per gross vehicle mile. Now, that is below any operating ratio that a truck company can operate on and stay in business.

On a regular haul about 700 miles, roughly a little better than 700 miles, between Edmonton and Winnipeg, I am advised that truckers endeavour to get not less than 35 cents per gross vehicle mile in order to make ends meet, and that is more or less a balanced operation in the facts that they have a considerable amount of traffic both ways, which is not the case on the Hay River run, it is essentially a one-way operation.

So to say that the truck could meet rail competition at Hay River, between Edmonton and Hay River, I think is making a statement which cannot be backed up on the basis of fact, because a trucker operating - and these figures are based on what is known as a single tandem unit, that is a tractor unit with two axles and a trailer with two axles at the rear, which is the normal type of vehicle which is used up in that country - if you increase it to a



tandem-tandem unit, which is a three-axle tractor with a two-axle trailer or semi-trailer, you increase your vehicle operating costs by about 5 cents per mile.

In this regard, at page 119 in this publication, Transportation in Canada, by Mr. Lessard, he quotes:

"In planning future highways of the Yukon and of the Northwest Territories, attention should be directed primarily to the provision of basic transportation avoiding wherever possible duplication of facilities. Dividing the available traffic between two major carriers might well result in higher rather than lower transportation costs".

So it is very improbable, and I would say almost impossible, for the trucker to meet the competition on that particular run of the railways rate at roughly \$1.88, based on their operating costs.

Of course, when the highway is completed to trans-Canada standards and the gross vehicle allowable weight is increased to 72,000 pounds, that will change, but again it will not allow for sufficient earnings to come down to what the gross vehicle mile operating cost would have to be in order to meet railway competition on that route. Therefore I do not feel that we can expect the trucker to meet the rail competition on that run, on the basis of figures which I have just submitted, which



can be checked.

I have talked to several trucking companies on this; I have asked them their opinion on this particular run. Yesterday I talked to two of the largest operating companies operating into Alberta in inter-provincial movements, and they say definitely they could not operate that Waterways route on less than about $37\frac{1}{2}$ cents per gross vehicle mile, which the railway rate would not give.

MR. FEEHAN: I wonder if Mr. Gordon's figures are based on the assumption that the vehicles in question would be dead-heading back from the Northern terminus all the way to Edmonton.

MR. GORDON: My figures are based strictly on a one-way haul. If there is substantial traffic coming back, those figures would change, but my information on it is that there is no substantial traffic coming back, that the trucks generally come back with very light or no loads.

COMMISSIONER THOMSON: Are these figures you quote from Grimshaw Trucking?

MR. GORDON: No, they are not from Grimshaw trucking.

COMMISSIONER THOMSON: Do you know their rates?

MR. GORDON: Well, the costs of trucking are comparable, whether it is one company or another. That cost only takes into consideration the actual



cost of the trucks, the depreciation and maintenance on the truck and the driver's wages; it does not take into consideration any operating costs or anything like that, it is strictly on a truck cost.

COMMISSIONER THOMSON: Grimshaw Trucking have been the only company operating that highway.

MR. GORDON: Yes.

COMMISSIONER THOMSON: Would their figures have been very illustrative of the whole thing?

MR. GORDON: I don't know them as well as some of the others. I happened to have a couple of the operators, the management of companies, in my office, and I asked them this question, and if the Commission wishes I will take it up with the Grimshaw Company and get their figures. But I think it is significant that at the present time the Grimshaw Company is the only company which is operating that route. There are transient truckers who do take loads up and back, and there may be a small operator up there, although I don't know of one; he has never contacted me about traffic. But in almost every route I can think of in the prairie provinces and western Canada there are two or three truckers operating, and if the Grimshaw Trucking Company's rates were at all out of line, I am sure there would be other operators in there with lower rates in order to get that business. Actually the truckers are their own best competition, they compete more



with one another actually than the railway competes with the trucker, and there is a continuous rate war between trucking companies, but that has not been in existence at any time in the north, which would indicate that the Grimshaw Company is operating a very efficient service at economic rates and their rates are not out of line or their rates are not susceptible to any great rate cutting. There is no necessity for a trucker to go and get a franchise or a certificate of convenience, and any operator with a public service vehicle licence can haul freight over that route.

COMMISSIONER THOMSON: Wouldn't it be better if we just had the Grimshaw Trucking rates?

MR. GORDON: I will endeavour to get them for you. The operating cost between one company and another of operating a truck doesn't change very much; they pay the same for gasoline, the truck vehicle costs are the same, the maintenance is comparable, and I don't think they will show any difference. But I will be glad to get them for you.

COMMISSIONER GAINER: I want to be clear on this \$1.88 figure. That is a hypothetical figure.

MR. GORDON: Yes. That was a figure I used based on the mileage. If the rate is set by the railways a little higher, which I do not anticipate, then, of course, it will alter it to some degree. On the other hand, if the railway goes in there with, say, petroleum products on an agreed



charge because of competition, the rate would be still lower and make it much more difficult for the trucker to meet rail competition. So I cannot see the truckers getting down to the basis of the rail rates in view of their costs. It is simply a matter of economics. Where the trucker can afford to come down where he has a balanced haul, he can bring it down to \$1.38 both ways, but if he has a very unbalanced haul he must get not less than 35 and preferably at $37\frac{1}{2}$, and in some cases where travel conditions are very bad he must go up to as high as 40 cents a vehicle mile in order to make ends meet.

MR. GUEST: Mr. Chairman, the gasoline trucks are \$1.45, not \$2.58.

MR. GORDON: That is true. The difference between the truck haul on general merchandise and the truck haul on petroleum products is that when the trucker leaves the refinery he goes out with a full load every time, he fills his tank to capacity almost every time. The general merchandise hauler, with more expensive equipment, very often his hauling less than a truck load, because a considerable amount of traffic is less than car load traffic, and therefore he has to balance his operation much more so than the petroleum hauler, and also the petroleum hauler has less billing expense and other expenses which makes his operation much - not much but to a degree a cheaper operation than a general



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merchandise hauler. That is illustrated in my office very often when we move petroleum products in liquid form and tank trucks with solid freight by truck hauler where our rate is very much higher because the cost of the equipment is very much higher and the load factor is less.

THE CHAIRMAN: How much do you say the oil is hauled for, Mr. Guest?

MR. GUEST: There isn't a published rate on this, but I understand it is from 12 cents to 14 cents a gallon.

THE CHAIRMAN: Are those the same figures you have, Mr. Gordon?

MR. GORDON: That is correct on the petroleum rates. The gasoline from Edmonton to Hay River is 12 cents a gallon, and the other is 14 cents.

MR. GUEST: Then, Mr. Chairman, if a truck goes out less than a truck load they have a higher rate, so it pretty well evens off. But the point, Mr. Chairman, is this, that I assume that trucks will meet railway competition, and as the highway improves there is no question that they will, but it is going to cut the costs if a railway goes in there by \$14.00 a ton if they go off the road.

MR. GORDON: If I may say something to that, that may be true if the railway were to get all the business, they would reduce it by that, but, as I pointed out, at the present time there have been



8,000 tons go into Yellowknife in the year 1958. I don't know what Grimshaw Trucking hauled up there, but I imagine it is the same, although the rates are higher. People are prepared to pay premium costs for delivery, and the service will not be anything comparable to what the truck operator will give and he will still get a good proportion of the business.

THE CHAIRMAN: This document refers only to the supplies going into Hay River and not the supplies going into Yellowknife, as I understand it.

Is that right, Mr. Grimble?

MR. GRIMBLE: It is only the Hay River residents, yes.

MR. GORDON: But at the same time the Hay River people would also use the truck for a proportion of their business because of the convenience of delivery, particularly perishable goods or goods of a very high value where the charges are not such an important factor as they are on lower cost goods, and I think if we are going to do it we have to equate those figures, what will move by rail, what we expect will move by rail, and I think that is what Mr. Grimble has done.

THE CHAIRMAN: Does that cover page 26? Page 27. That is the case of the suggestion that if the railroad is not built the lumber in Wood Buffalo National Park will be lost.

MR. GRIMBLE: A portion of it, not all of



it.

THE CHAIRMAN: I understand Mr. Denney said he would go on in any event, whether it was built or not.

MR. GRIMBLE: Yes.

THE CHAIRMAN: How much of this lumber would you calculate would be taken out without the railway and how much would be taken out if it was built?

MR. GRIMBLE: 28 million board feet a year would be taken out without the railway, and the remainder would be taken out with the railway.

THE CHAIRMAN: How much is that?

MR. GRIMBLE: 1.29 billion.

THE CHAIRMAN: You are assuming it will all come out if the railroad is built.

MR. GRIMBLE: That is right, sir.

THE CHAIRMAN: How many feet a year does that mean?

MR. GRIMBLE: In 20 years that is a cut of 60 million board feet additional cut per year, against 20 years. The biggest problem would be, of course, the 20 years, the 25 years. The number of years is a very problematical thing.

THE CHAIRMAN: You are suggesting another 60 million feet a year.

MR. GRIMBLE: Yes, in order to achieve this in 20 years.



THE CHAIRMAN: Or a little less in 25 years.

MR. GRIMBLE: That is right, sir.

COMMISSIONER THOMSON: If you built that highway which you discontinued yesterday, could you not get a lot of the lumber out that way?

MR. GRIMBLE: I don't think you could compete by - in other words, you wouldn't take out - that lumber is accessible to the river now and it would probably be taken out by the river in any case, regardless of the highway.

COMMISSIONER THOMSON: You mean it wouldn't be cheaper to bring it up as far as Vermilion Chutes and ship it?

MR. GRIMBLE: No; you would still have to take it to Peace River town. It would continue to go the way it is now at present. It would go down by water and then moved by Waterways.

COMMISSIONER THOMSON: You have already put about 90 miles on it at the beginning there, 90 miles down to the mill and 90 miles back.

MR. GRIMBLE: This is how they are operating now.

COMMISSIONER THOMSON: I am just wondering - you don't think any would come out by the highway at all, it would all come out by water.

MR. GRIMBLE: Yes, I think it would all come out by water.



MR. BISHOP: Mr. Chairman, Mr. Denney is here. Would you like to have him speak to this question? He has a firsthand knowledge of this point.

COMMISSIONER THOMSON: Well, we had some figures given by the people up around Keg River. They were hauling - I forget what they said the maximum was down to Grimshaw - it was something like 180 miles they were hauling now by trucks.

MR. DENNEY: I don't know about the mileage they were hauling or the mileage of the proposed western route. I presume it is in that order. It is approximately 200 miles and you would be at the limit of your haul; you might possibly get a little timber at the Fifth Meridian, but very little, if any. It would not be practicable to operate a mill in there at any rate, because all the timber that would come in there would have to be towed upstream, and you cannot tow logs upstream in the Peace River.



THE CHAIRMAN: I would like to ask a question or two of Mr. Grimble and Mr. Gordon, if they do not mind. I think we have covered this before, but while we have the matter here in front of us I would like it corrected. The present rate for Class 45 from Edmonton to Waterways is \$1.07. From Waterways to Yellowknife it is \$1.65, making a total of \$2.72 per hundredweight. What do you calculate will be the rates if a railway is built on the eastern route?

MR. GRIMBLE: I imagine we could use the same 3.6 cents per ton-mile, and just work the mileages out.

THE CHAIRMAN: Now, from Edmonton to Waterways will be \$1.07, will it not?

MR. GRIMBLE: Yes.

THE CHAIRMAN: How many miles is it from Waterways to Bell Rock?

MR. GRIMBLE: Three hundred miles, approximately.

THE CHAIRMAN: Three hundred miles?

MR. GRIMBLE: Yes, in round figures.

THE CHAIRMAN: And at 3.6 cents a ton-mile it is ---

MR. GRIMBLE: Yes, 3.6 cents a ton mile. We worked this out before and it came to \$2.66 a hundredweight.

THE CHAIRMAN: Do you mind if we just do it



again? That is \$5.40, is it not -- no, I am sorry. It is another 54 cents, is it not, by rail to Fort Smith?

MR. GRIMBLE: That is converting tons to hundredweights?

THE CHAIRMAN: Yes.

MR. GRIMBLE: Yes, that is right.

MR. GUEST: It is \$1.66 to Fort Smith from Edmonton by Class 45.

MR. GORDON: Yes, Class 45 would be \$1.66. It would be slightly less than that to Bell Rock Harbour. It is nine miles, and I believe it brings it down one block, but as the mileages will change somewhat I think we can take the rate to Fort Smith because we have a rate from Fort Smith north.

THE CHAIRMAN: And from Bell Rock to Yellowknife is how much?

MR. GORDON: That is \$1, sir. That is the Fort Smith rate.

MR. GRIMBLE: \$2.66 is the figure we had previously.

THE CHAIRMAN: Yes, it is in as an exhibit. Is that everything?

MR. FOUKS: I have a few questions with regard to this timber, if we have not passed that page.

THE CHAIRMAN: Yes.

MR. FOUKS: When we referred to page 15 I believe it was, there was a question raised about



stumpage fees, and I was advised at that time that it was on page 27.

MR. GRIMBLE: I can explain that. I can explain what Mr. Fouks is talking about. On page 27 this dollar value includes, of course, stumpage fees and everything -- it includes all aspects of it. If you turn back to the page you referred to, or the pages subsequent to that, you will see that we have taken into account the savings to the operator by virtue of having a railway. Consequently, you cannot add -- in other words, if the government is to raise the stumpage fee you have to take either one or the other. The reason they would raise the stumpage fee is because of the savings to the operator. In other words, you do not want to add it in twice, but I am sure the government would not raise the stumpage fee if the operator was not making savings which would allow him to pay this stumpage fee.

MR. FOUKS: My lord, I am sorry, but we have evidence before us from one of the operators that the stumpage fees will be raised if a railroad goes in. He has been advised of that. Page 15 indicates the operating cost saving to such an operator, but it indicates a cost saving without indicating the extra expense.

THE CHAIRMAN: How would you deal with that?

MR. FOUKS: I was advised it was covered on page 27. In order to be able to properly cover this



in our rebuttal brief I am suggesting that we need the information that is or is not included. In other words, I was advised it was included, and as yet I cannot see it.

MR. BISHOP: Mr. Chairman, I think Mr. Fouks has overlooked the basic concept of this particular table we are presenting. We have not confined ourselves to what we consider to be savings to any particular person, or any particular company, or any particular body. Now, if we had added as one of our savings so many dollars per ton to the present operators which they will save on savings we could, it is true, balance against that an extra sum -- I think it is \$2.25 which is the figure suggested -- for additional stumpage fees. Then we would have had on page 28 an extra \$2.25 for stumpage fees which would accrue to the federal government which they would not otherwise get.

In other words, the operators save on the transportation. If they share part of that saving with the federal government by way of further stumpage fees, why, it is still a net gain to the two parties. We are not trying to count in all the sums of money that might pass back and forth between various parties. We are only trying to show overall savings.

THE CHAIRMAN: Mr. Bishop, without following a lot of red herrings, are you not in this position



that each one of you is saying that if a railroad is built along the route you are advocating it is going to be of advantage to the lumber industry. There is going to be more lumber taken out along the east route if the railroad is built there and less along the west route, and vice versa; if the railroad is built along the west route there will be more lumber taken out there than along the east route? You are trying to suggest in the form of figures some advantages there will be, or the amount of advantage there will be, with regard to the lumbering in Wood Buffalo Park, but cannot we resolve most of this by just going back to the argument that was advanced some time ago as to the relative advantages of the development of the lumbering industry in the two parts of the north -- east versus west?

MR. BISHOP: That is quite true, my lord, but I wanted to counteract the suggestion that we are leaving out a counter-figure that should have been put in. In other words, we are -- for instance, in our last page where we talk about lumber which we feel would never be taken out at all we have taken the net selling price in New York of a thousand board feet and multiplied that by the number of thousands of board feet that we have. Now, that figure of 85 is going to be divided up in many ways; some of it will be profit to an operator; some of it will be freight to a railroad; some of it will be



stumpage fees to the government.

COMMISSIONER GAINER: What you are saying, Mr. Bishop, is that on page 15 of this exhibit is your estimate of the saving, and part of it might accrue as extra additional profit -- or all of it, even -- to the operator, or it might all be taken over as taxes and stumpage fees, and this, that and the other thing. But, you say that this is the pool out of which either the government or the operator can suck additional revenues, shall we say. Is that it?

MR. BISHOP: That is exactly it.

COMMISSIONER GAINER: Would that sound reasonable, Mr. Fouks?

MR. FOUKS: I must say, Dr. Gainer, that when you are calculating savings, I do not consider it to be reasonable. I would, however, definitely ---

COMMISSIONER GAINER: Is the concept clear, that this could include stumpage fees, or ---

MR. FOUKS: Oh, yes, that concept is clear. I am suggesting that the presenting of it this way is misleading, but I will definitely side with the position of the Chairman because I feel that is really the issue when it is applied to lumber, but it is not the question of the savings unless you take into consideration the cost factors as well. You cannot take one side without looking at the other side. That is my submission.

COMMISSIONER GAINER: But it is clear that



nothing has been omitted or added twice in whatever procedure has been used here?

MR. FOUKS: I am not suggesting that anything is added twice, but I am suggesting that something is omitted which is a cost factor. If transportation is a cost factor, if inventories are a cost factor, if food is a cost factor -- and they are all in here -- then so are stumpage fees and so are legal fees. They are all cost factors.

MR. FEEHAN: No more than is income tax. I cannot see how you could include income tax, and take that off.

MR. FOUKS: Let us look at profit before tax, then.

THE CHAIRMAN: It seems to me that if we are going to go into these figures a tremendous lot of work is going to have to be done by all of us, and it may not be necessary. If it is fair to assume, as I hope it is, that we can disregard pages 15 and 27 in view of the discussions we have now had, and keep in mind the fact that if the railroad goes along the east route -- well, there is some lumber over there that will be available to the railroad, and we have heard a lot of discussion about lumber, whereas if the railroad goes along the west route there is a lot of lumber over there as well.

MR. BISHOP: We do not go that far, my lord. For instance, page 27 represents lumber that we feel



would be¹lost entirely to the economy even if another railroad were built, say, twenty years from now.

THE CHAIRMAN: That is true of lumber all over Canada, is it not? There is over-mature lumber in the western area.

MR. BISHOP: Not anything like to the same extent.

THE CHAIRMAN: There is some evidence to the effect that there is quite a lot there on the western route.

MR. BISHOP: No, I do not think so, my lord. I think you will find with respect, that the evidence shows that the proportion of mature and over-mature lumber in Wood Buffalo Park is very much higher.

THE CHAIRMAN: Well, we will have to consider the evidence because I think there is a conflict there.

MR. FEEHAN: I believe Mr. Roethel said originally there was at least as much over-mature lumber on the western route, but when he returned here he took that statement back, and said there was more over-mature lumber on the eastern route.

THE CHAIRMAN: Did he? Then, there is the over-mature lumber in Wood Buffalo Park which will be lost to the national economy if it is not gotten out.

MR. BISHOP: And there is the further factor, my lord, that the western route is served by a highway which will mean that a considerable amount of that



lumber may be available anyway. Now, there is undoubtedly a difference in cost factor to the operators which ---

THE CHAIRMAN: And there is a water route on the east side.

MR. BISHOP: That is right, but the cost factor ---

THE CHAIRMAN: These are factors we are going to have to consider, but if we are going to start considering a lot of arithmetic in regard to everything that comes out, or could come out on the eastern route, or could come out on the western route, we are going to be playing with figures here for the next two years; is not that so?

MR. BISHOP: That is true, my lord, but is not that still, in general, the proper approach with this qualification, that when it is attempted to evaluate things in dollars it will become apparent that certain factors are exceedingly important and other factors are not very important, and that time should not be wasted on the small ones.

THE CHAIRMAN: To that extent I agree that the figures you have set out are all of interest. You think there are some figures that have been omitted from this, Mr. Fouks, that should have been there?

MR. FOUKS: I am suggesting, my lord -- first of all, again, I have to say, subject to



correction, because I do not know how they arrived at some of these figures, that it seems to me they have taken half of the Wood Buffalo Park -- half the total volume of park -- in order to arrive at that figure. We have no evidence yet that that would have to be tapped. Any evidence we have to date is that it would be fifty per year for twenty years, which is the annual allowable cut. We have now reached the point in order to accomplish what they are suggesting that we have to have 88 to 90. We have no evidence that that can be done. Their total figures show subject to correction because I do not know how they arrived at them, that they have mature and over-mature pulpwood and sawlogs, and yet we have had evidence that it is fifty-fifty.

Mr. Bishop, rightly or wrongly, thinking of the economy of Canada, indicates the loss of lumber and income to the country. If you compare those figures to British Columbia they are infinitesimal. The British Columbia loss would be fantastic. In the one area alone, in the Peace River area ---

THE CHAIRMAN: What is that?

MR. FOUKS: You have those figures, Mr. Guest.

MR. GUEST: The total volume in the area of Peace River, which is compared in our brief, is estimated at 6.6 billion cubic feet.

THE CHAIRMAN: Is that in your brief?



MR. GUEST: Yes, on page 32 there is a calculation of the area of the Peace River country of British Columbia.

THE CHAIRMAN: When you say the "Peace River country of British Columbia" ---

MR. GUEST: Well, we have a map ---

THE CHAIRMAN: That is an area in which we are not interested.

MR. GUEST: No, we have done this as a matter of comparison. Now, this area which, of course, is larger than Wood Buffalo Park but still smaller than the total area covered by either the eastern or western route, has got ten times the volume, and the loss to the country would be tremendous in terms of mature and over-mature timber that cannot be taken out. We have calculated the volume in Wood Buffalo Park at 600 million cubic feet, and that includes all the timber.

THE CHAIRMAN: Just a moment, please. You say in this Peace River area of British Columbia there is ten times the volume of timber that there is in Wood Buffalo Park?

MR. GUEST: That is right. The volume of Wood Buffalo Park has been calculated at 600 million cubic feet with an annual allowable cut ---

THE CHAIRMAN: Six hundred million cubic feet?

MR. GUEST: Yes, and 13.3 million cubic feet as an annual allowable cut -- that is approximately 40 million board feet ---



THE CHAIRMAN: The annual allowable cut is what?

MR. GUEST: 13.3 million cubic feet.

THE CHAIRMAN: In board feet it is five times that?

MR. GUEST: We used the figure 6, which gives 40 million.

THE CHAIRMAN: What is that?

MR. FOUKS: Forty million board feet.

MR. GUEST: No, it is 6 times 13 which gives 78 million, and we estimate that half of that is saw timber, or 40 million board feet of saw timber. The Department of Northern Affairs says 50 million ---

THE CHAIRMAN: Yes, of which about 40 million board feet is saw timber?

MR. GUEST: Yes. Our calculations give 40 million board feet of saw timber per year as the annual allowable cut. The Department of Northern Affairs -- or, rather, the Commissioner of the Northwest Territories stated that there is an annual allowable cut of 50 million board feet in his brief. In twenty years that would be one billion board feet which you could cut.

THE CHAIRMAN: That is as against 88 million that Mr. Grimble has estimated?

MR. GUEST: Mr. Grimble is going to give the park a brush cut. He is going to take it all.

MR. BISHOP: Mr. Chairman, I would suggest



that Mr. Guest is reading from the British Columbia brief which was submitted many weeks ago, and since that time there has been a very considerable amount of evidence put before you. I hope that does not have to be repeated, but it certainly does not agree with their figures on timber on either of the routes, and, also, I would suggest that the very large amount of timber which might or might not be possible to be recovered from the British Columbia section of the Peace River block is extremely interesting, and it would be a great loss to the economy of Canada if it is not recovered, but it is not at all relevant to this discussion. We do not have before us the problem of building a railway that will serve that area. I do not think it has been suggested that the western route will recover timber from British Columbia which would not otherwise be recovered, so I fail to see just where that comes into the question.

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THE CHAIRMAN: Apropos that, Mr. Bishop, it seemed to me that perhaps it might be relevant from this point of view, and I would like your comments, that if there is a very large loss from the point of view of a national loss or a loss to the national economy of Canada of over-mature lumber every year, then perhaps it is not so important to consider a relatively small loss in one place. Perhaps the national economy, so far as over-mature lumber is concerned, can be looked after with much less effort or a saving made with much less effort some place else. That is not saying it should not be considered, but there should be a proper balance.

MR. BISHOP: With respect, sir, I don't agree with that; I don't think that the size or the type of loss we are concerned with here is relevant in relation to the economy of Canada as a whole or the probability of similar losses elsewhere in Canada, because we are not considering the question of where best to build a railroad to avoid losses of over-mature timber - there may be many, many places where it would be better to spend \$65 million to build a railroad where we could get much more timber than we could either on the eastern or western route - but we are deciding the merits of these two particular routes.

The railroad is agreed, I think, to be in the nature of 60 some million dollars. We feel that



one route will save something in the order of twice that of an asset that would be otherwise lost if no railway is built. So it becomes a question of whether this is an important item in relation to the cost of the railway we are concerned with, not in relation to the total economy of Canada.

I submit that the other concept is no more relevant than saying, for instance, that the freight to be carried out of Grimshaw or Waterways is going to be insignificant compared to the freight that is carried out of Vancouver or Toronto or Montreal, which is undoubtedly true.

THE CHAIRMAN: Now, in order to save this as set out on page 27 of your document, as I understand it, you suggest that there will be 28 million feet per year taken out, anyway, whether there is a railroad there or not.

MR. BISHOP: That is right.

THE CHAIRMAN: And in order to save it there has to be another 60 million taken out, that is in 20 years, which will be 88 million feet. You say that there is some evidence to suggest that the Department of Northern Affairs lays too low an estimate on the annual allowable cut for Wood Buffalo National Park.

MR. GRIMBLE: It is difficult to place an annual allowable cut on over-mature timber; this is the problem. Actually the sooner it is cut the



better. The timber we are talking about along the Peace River, Birch Mountains, Birch River and the other locations we mentioned previously - the railway passes close enough that it can be taken out. In fact, the inventories we gave you were all material that was over 150 years old; in fact, they are not allowing any cuts on less than 160 years old, so it is mature at that point. The allowable cut is purely theoretical; the faster this material is cut the better.

THE CHAIRMAN: Mr. Denney is here. Are you cutting only timber that is over 160 years old?

MR. DENNEY: Yes. Our contracts require that mature timber be considered as 160 years, and we cut only mature timber or timber that is in excess of that. That is required by the government, and they have a forestry man resident on our operations. I might say that the theory behind an annual allowable cut is that when the entire forest area is growing timber, of all age classes, that allowable cut will be allowed. It came out in evidence - this is mentioned in Mr. Thorpe's thesis and also in another brief presented here - that the normal thing in the case of mature and over-mature stands is to accelerate the cutting until such time as the older mature is out of the way.

THE CHAIRMAN: And does your contract provide that you can cut as much as you like in any one year of mature and over-mature timber?



MR. DENNEY: Yes, so that these grounds will be growing more timber. We can cut as much as we like.

THE CHAIRMAN: Anything more concerning page 27?

MR. GUEST: Well, Mr. Chairman, I would like to know if the figure of 1.8 billion is all mature timber.

MR. GRIMBLE: Yes. That is the timber that is all over 150 years.

MR. GUEST: This is the figure?

MR. GRIMBLE: Yes, that is the figure from the Forestry Department.

MR. GUEST: Mr. Hamilton in his evidence in volume 3, the date of September 10th, page 149 - a question by Mr. Feehan:

"MR. FEEHAN: We have received information that the total lumber available in that area is one billion eight hundred board feet; would that be correct?

"MR. HAMILTON: In that immediate area that is the present estimate, yes.

"MR. FEEHAN: And you have told us that you have licenses on a total of one billion five hundred million feet of lumber.

"MR. HAMILTON: That is the total licence issued, we have four hundred and sixty million ourselves, and Denney has one billion and fifty



million. Denney has more timber than we have."

Now, I would like to know, is this all mature timber? Now, we have the Park, as compared to 15 per cent along the western route. I would like to know if this is all mature and over-mature timber.

THE CHAIRMAN: When Mr. Hamilton was speaking of timber could he have been referring to over-mature timber?

MR. GUEST: All timber, total timber. That is the total licensed issue.

MR. DENNEY: I submit - I am familiar with Swanson's contract because they are identical to ours and their licence covers only mature and over-mature timber, as does ours. In fact, all of the licences in Wood Buffalo Park are for only mature and over-mature timber.

THE CHAIRMAN: What do you say about this evidence as indicated by Mr. Guest?

MR. DENNEY: I don't think it is contradictory at all. It is mature and over-mature timber.

MR. GUEST: I should have read another page in which Mr. Hamilton does say that this is mature and over-mature in answer to a question by Mr. Feehan. Mr. Hamilton said:

"There is some mature in that area that would not be normally sold at this time.

"MR. FEEHAN: You have not got my question, I do not think. This gross of one billion



eight hundred million - -?

"MR. HAMILTON: That is matured.

"MR. FEEHAN: That is mature and over-mature?

"MR. HAMILTON: Yes".

THE CHAIRMAN: That is consistent, is it?

MR. GUEST: Yes.

MR. FEEHAN: I got in touch with the Forestry Department of Alberta and was informed that the leases covered somewhere in the vicinity of one billion five hundred million, and the leases covered only mature and over-mature timber.

MR. BISHOP: I might point out that in a period of 20 years there will be more timber that is over-mature that is not now mature or over-mature.

THE CHAIRMAN: Does that conclude page 27?

I think that concludes your brief, does it, Mr. Bishop?

MR. BISHOP: Mr. Grimble has given me two pages here. They have just been retyped. They were part of the exhibit 52 (ooo).

MR. GRIMBLE: They had typographical errors, and rather than have any errors we retyped them.

THE CHAIRMAN: What page is this to be?

MR. GRIMBLE: It could be pages 29 and 30.

THE CHAIRMAN: This is another sheet, is it?

MR. GRIMBLE: You already have them, but these have been retyped. You have already received them last Wednesday.



THE CHAIRMAN: We haven't had these pages.

MR. GRIMBLE: No. They were renumbered.

MR. FOUKS: It is part of the first three sheets which are not numbered, Mr. Chairman.

MR. GRIMBLE: That is right. There are two summary sheets, and then these two are attached to the summary sheets.

THE CHAIRMAN: Well, this might be a good time for us to adjourn. We would like to look over these and see what questions we would like to ask about them.

Suppose we adjourn until quarter to twelve, and with good luck we may be able to finish this by noon.

--- A short recess.

MR. GRIMBLE: We might cross out on the first part in the summary sheet under savings item number 2. 104,000 should be crossed out completely. There is no figure in there for number 4.

Going down to interest on capital, item number 2 again should be crossed out.

On the bottom of page 1 we have multiplied 600,000 by 20; it should have been multiplied by 10, so we should subtract 6 million from the total, making a total now of 12,090,000.

On page 2 we have the 20 years multiplied by item number 1 - it is page 12, item number 4



again. We should take the 240,000 and multiply it by 10 instead of multiplying it by 20, which would reduce the total by 2,400,000, making a total now of 23,800,000.

THE CHAIRMAN: You say in 20 years this amounts to 26,200,000, and it should be 23,800,000.

MR. GRIMBLE: Yes, sir, that is right.

THE CHAIRMAN: That is multiplying 240 by 10 instead of 20.

MR. GRIMBLE: Yes, sir, that is right.

Then your previous grand total at the bottom of the page was 153,940,000 dollars. This changes now, with these corrections to 145,436,000 dollars.

THE CHAIRMAN: Anything else on those two pages, any corrections?

MR. FOUKS: There is one mathematical error. They changed the total to 12,090,000 dollars on page one, and I wonder if they took into consideration the savings, item number 2, which they struck off.

MR. GRIMBLE: I am sorry, that was missed, but it was included in the total. The grand total is still correct.

MR. FOUKS: The page is wrong but the grand total is right.

MR. GRIMBLE: Yes.

THE CHAIRMAN: Now, the next sheet deals with Royalite, doesn't it, other operating cost savings depending on future development now in the



planning stage. Any corrections to that. I am not sure I follow item number 1.

MR. GRIMBLE: This was dealt with in some detail. This is what we dealt with in mining in which we pointed out that the cost of the pilot commercial plant was increased by 3 per cent because of the present transportation facilities and it was reasonable to conclude that the same 3 per cent would apply on the big plant.

THE CHAIRMAN: This is to be saved if the transportation costs are reduced.

MR. GRIMBLE: Yes, sir.

COMMISSIONER THOMSON: What is the total saving to Royalite, which figure do we go for here? Is the 200,000 - -

MR. GRIMBLE: Are you on the revised sheet, sir?

COMMISSIONER THOMSON: I have got one. I see. The actual saving to Royalite would be what, or is that given here?

MR. GRIMBLE: In the first item, \$1,500,000, item number 1.

THE CHAIRMAN: Where is the error that is corrected.

MR. GRIMBLE: On this sheet here, sir.

THE CHAIRMAN: And item 2 is the question of saving of freight also.

MR. GRIMBLE: Yes, sir.



THE CHAIRMAN: And item 3 is in cost of fuel. You are assuming there, are you, that that is assuming at Pine Point, Uranium City and Yellowknife fuel from the Royalite plant would replace electric power and diesel power or any other form of power.

MR. GRIMBLE: No. They could still use diesel fuel, but the diesel fuel would come from Royalite or Edmonton.

THE CHAIRMAN: Instead of from Norman Wells.

MR. GRIMBLE: Yes. We have said that Royalite's price will be the same as Edmonton's price; the saving of freight will be X dollars.

MR. FOUKS: As to Royalite, wouldn't it pay Royalite to pay their own extension from Waterways?

MR. GRIMBLE: They would have to build a railroad from Royalite up to Bell Rock.

MR. FOUKS: I am talking about Royalite, number 1.

MR. GRIMBLE: No, this wouldn't justify it.

MR. FOUKS: What would?

MR. GRIMBLE: \$5 million.

THE CHAIRMAN: My recollection is that it was \$5 million.

MR. GRIMBLE: This isn't a yearly charge.

THE CHAIRMAN: This is just the cost of the original plant.



MR. GRIMBLE: That is right, Mr. Chairman.

THE CHAIRMAN: Item 4, 200,000 tons at \$1.50 a ton is \$3,000. What is that 200,000 tons?

MR. GRIMBLE: That is made up as below - it is not very well laid out.

THE CHAIRMAN: But the 200,000 tons is made up as you see below. The 200,000 tons is silica sand, coke and sulphur.

MR. GRIMBLE: And supplies, yes.

THE CHAIRMAN: Do you think all of those things would be that saving?

MR. GRIMBLE: Actually it would be greater than \$1.50 a ton.

THE CHAIRMAN: How do you calculate it on that?

MR. GRIMBLE: If you had to handle it by the present transportation routes, the saving would be \$1.50 a ton. If the transportation wasn't in there it wouldn't be moved that way. It would cut out the handling costs, and the handling costs alone were \$4.00 a ton.

THE CHAIRMAN: That is the handling costs of all of those things coming from the Royalite plant. If they were put on barges and brought up the waterways it would be \$1.50 a ton.

MR. GRIMBLE: Or greater.

THE CHAIRMAN: That is because of the



handling.

MR. GRIMBLE: That is right, sir.

THE CHAIRMAN: When they are handling the type of thing you are mentioning, sand, coke and sulphur, are the handling charges that great?



MR. GRIMBLE: There would also be the freight movement, of course, of some 20-odd miles of water movement compared to rail movement and the incremental rail movement would be considerably cheaper than the short water haul. Is that clear? The 26 miles of rail haul ---

THE CHAIRMAN: Yes, I see what you mean, but I do not know whether I agree with it.

MR. GRIMBLE: Well, they cannot move goods twenty miles by water as a short haul movement for the same rate as they can move the incremental 26 miles on a long rail haul.

THE CHAIRMAN: When you deduct the handling charges can they not? It is the handling charges that makes the 20 miles a difficult problem rather than the actual haul.

MR. GRIMBLE: We are back into a discussion of costs against rates, again.

THE CHAIRMAN: I thought the situation was that once you get the handling charges taken off it does not cost any more per mile to haul on a short haul than on a long haul.

MR. GRIMBLE: Except that in their rate scale they do not allow any reduction for below 25 miles, or when it gets below 20 cents. If you talk about 100 miles as compared with 500 miles it is correct, but when you talk about 2 miles as against 200 miles it is not correct. At some point you have to



have a basic minimum.

THE CHAIRMAN: Yes. Are there any other questions? On the last page you have estimated the minimum tonnages.

MR. FOUKS: Before that there is the Northern Alberta Railway profit and loss statement for 1957. At least, I have a copy of that.

MR. FEEHAN: Do you have these, sir?

MR. GRIMBLE: You asked for these, sir, and we extracted it. It is the same as the Hudson's Bay Railroad operating figures.

THE CHAIRMAN: Yes.

MR. GRIMBLE: There is one correction in there. You will notice the stenographer put a dollar sign in front of 2.20; it should be 2.2 cents. It is corrected on most of the copies.

MR. BISHOP: I think you have already had that sheet, my lord. I think it was given to you last Wednesday.

THE CHAIRMAN: Yes.

MR. BISHOP: I think this was added to Exhibit 52-000.

MR. FOUKS: I just wonder if they have the figures for 1956 and 1955. I assume they have not.

MR. GRIMBLE: This is the same as for the Hudson's Bay railroad which we had previously, and this is the most recent statistical record we had. The figures for 1955 and 1956 are probably available,



but we used the last figures we had.

THE CHAIRMAN: Now, what about the last sheet, the estimated minimum tonnages? I think most of these have been dealt with already. This is just a gathering of them together and a giving of your estimates? Are there any questions on that? That does complete your brief, then, does it not?

MR. BISHOP: I think that completes it, my lord.

MR. FOUKS: Have you covered the last page, my lord? I am sorry; I did not hear you. Did you ask if this was their estimates of tonnages?

THE CHAIRMAN: Yes.

MR. FOUKS: I would like to ask one further question: Are these their estimates based on the evidence we have heard or merely on the evidence of the Edmonton Chamber of Commerce?

THE CHAIRMAN: Have you any comment on that, Mr. Grimble?

MR. GRIMBLE. It is based on our studies, both prior to the Commission and during the hearings.

MR. FOUKS: That really does not answer the question, but it will suffice, my lord.

THE CHAIRMAN: That completes the brief, then. Thank you very much, gentlemen. It has been a long time, but we have finally come to the conclusion.

MR. GORDON: Before we adjourn, sir, may I mention that the Commission asked me to prepare a



statement of the estimated carloadings a week or so ago, and I have now those for you.

THE CHAIRMAN: Thank you very much. Can this be filed as an exhibit? What number will it be?

MR. FEEHAN: It will be Exhibit 52-WWW; it is the estimated annual carloadings on both routes.

MR. GORDON: Yes, there are two sheets to it; one for the eastern route and one for the western route.

THE CHAIRMAN: The estimated annual carloadings on each route; is that right?

MR. GORDON: On each route, yes.

THE CHAIRMAN: It is pretty much the same thing but in a different form as the last sheet to the last exhibit which we were discussing, is it not?

MR. GORDON: No, sir, that information has not been filed at all before. I gave some figures when I read from a statistical analysis I had made for my own information, and they were put into the record, but the Commission asked me to prepare them in a statement form, which I did.

---EXHIBIT NO. 52-WWW: Document entitled "Estimated Annual Carloadings via Waterways (eastern) Route"; and document entitled "Estimated Annual Carloadings via Grimshaw (western) Route".

THE CHAIRMAN: Now, we have the sheet that Mr. Grimble has given us containing the estimated minimum tonnages. Do your estimated annual carloadings



correspond with Mr. Grimble's figures?

MR. GORDON: The tonnages in that correspond with Mr. Grimble's tonnages. I took the basis of the Canadian National loadings for various commodities to estimate how many carloads would be available on each route.

THE CHAIRMAN: You have just translated tonnages into carloadings; is that right?

MR. GORDON: Yes.

THE CHAIRMAN: Gentlemen, we will adjourn now. We may not resume until tomorrow morning, but I am hoping that there are two men who have promised to give us some information who will be available at two o'clock this afternoon. If you would like to wait for a few minutes we can find out if they are coming. We will adjourn for five minutes, and then we will know when we come back whether we will go on this afternoon, or not.

---After a short recess, luncheon adjournment.



--- On resuming at 3 p.m.

THE CHAIRMAN: Mr. Heffernan, we have come in here without a copy of your brief. Have you got an extra copy with you?

MR. HEFFERNAN: I am afraid I didn't bring one along with me.

COMMISSIONER THOMSON: I have one.

MR. HEFFERNAN: There were only two points that I made in it.

THE CHAIRMAN: Mr. Heffernan, it is good of you to come at such short notice. We would appreciate it if you would read your letter to us so that everyones mind is refreshed on what is in the letter, and then if there is anything further that you can say, either with regard to the points that you have raised here or any other points pertaining to this railroad, we would be very glad to hear about it.

MR. HEFFERNAN: This is a brief to the Manning Commission re railway to Pine Point, submitted by Premier Steel Mills Limited.

The primary interest of Premier Steel Mills Ltd. in the route location of the projected railway to Pine Point lies in the transportation and sale of steel to Northern points.

At the present time, Premier Steel Mills is shipping substantial tonnages of steel and steel products to the Northern mining districts. Trans-



portation is difficult in that due to the extremely short shipping season, products must be stockpiled to meet the sudden demand during the short shipping season. This presents costly inventory and manufacturing problems to the steel mill that could be eliminated by a railway which would provide year around shipping through a combination of rail and trucking to the mine site.

Shipping to Great Slave Lake area will be satisfactory whichever route is taken - whether it be via Waterways or via Grimshaw. However, a route through Grimshaw would exclude the important Uranium City-Beaverlodge area which provides a substantial market for steel products - equal in total tonnage to the Great Slave Lake area.

Using the Waterways route, an important factor as far as Premier Steel Mills is concerned is that the projected railway will open up a large new section of the Precambrian Shield to transportation and could lead to important mining developments. Since each ton of ore mined and concentrated represents a consumption of from 7 to 10 lbs. of steel per ton it becomes obvious that substantial new markets for steel and steel products become available through mining development. On the other hand, development of new wheatlands does very little to increase steel markets.

A secondary interest on the part of Premier



Steel Mills lies in the matter of raw material supply. At the present time Premier Steel Mills holds important low-grade iron ore deposits in the Peace River area with ready access to existing rail lines. A high grade blending ore to mix with Peace River ore would forward the utilization of Peace River ores. From geological experience to date in Canada it is evident that the best possibility of finding high grade iron ores, or alternately ores that can be concentrated to a high grade product lie in the Precambrian Shield. The route via Waterways will bring transportation to a large new area of the Precambrian Shield. Respectfully submitted, G. R. Heffernan, Managing Director, Premier Steel Mills Ltd."

THE CHAIRMAN: Is there anything you would like to add to that, Mr. Heffernan? Perhaps you have had some further ideas since you wrote it.

MR. HEFFERNAN: I think, Mr. Justice, on the matter of the iron ore deposits in the Pre-Cambrian, I might be able to add something to that. Of course, all the major deposits of iron ore in Canada to date have been found in the Pre-Cambrian Shield. These are normally - they are magnetites or hematites. I don't know whether it is necessary to go into detail on this, but the whole Labrador Trough is in the Pre-Cambrian Shield, the Ungava deposits are in the Pre-Cambrian Shield, Steep Rock is in the Pre-Cambrian Shield, and, of course, the



large Masabi range in the United States. In fairly recent times rather major anomalies have been found in the Pre-Cambrian Shield; they haven't yet been properly explored. There is one, I believe, at Neepawa, Manitoba, which indicates a very large ore body under some 2,000 or 2,500 feet of overburden; there is another one at Choiceland, Saskatchewan, which has been drilled, and this is a magnetite ore body which lends itself to concentration. These are probably border line cases because of the high overburden. On the other hand, as you go along further north there has been a deposit of magnetite, again a concentrating grade, found on the surface not far from Uranium City. I believe it is held or was found by Mr. Radisics. I believe there have been other indications of iron ore found in the area generally from Lake Athabasca along the edge of the Shield that has been explored up there. But not much attention has been paid to these deposits. Iron ore is a commodity which requires very cheap transportation, cheap transportation in the neighbourhood of a cent a ton mile or less, and train load lots are quite common in Canada and in the United States.

A railway running along or close to the Shield, as it would on the eastern route, if some of these present prospects were developed and proved to have substantial tonnage, could be an economic



source of iron ore for an industry in Alberta.

I think other than that I haven't much to say. I believe that the question generally of finding mineral deposits in the Pre-Cambrian Shield has been rather well covered by previous witnesses and people who are much more experienced in that business than I am. My particular interest is in the possibility of finding high grade iron ore deposits or, alternately, low grade deposits which do lend themselves to concentration, and my major point is that the magnetite ores, which generally lend themselves or are reasonably amenable to concentration, are found in the Pre-Cambrian formations.

THE CHAIRMAN: Is it fair to say that you don't know of any specific prospects other than that one Mr. Radisics found near Lake Athabasca, but that the Shield is the place where one is inclined to look for these things?

MR. HEFFERNAN: Yes. I don't believe at this point we can say that there is any commercial deposit that we know of in that area; but I think if it appeared that transportation was going in there, we would probably spend some money to put field parties out to see what would turn up and to look at what has been brought in by prospectors, where we have said it is very nice, but there is no transportation, and to go and see it. I think



we would do some fairly extensive prospecting in that area because it is a pretty likely spot to find the type of thing for which we are looking.

THE CHAIRMAN: When you say in that area, what part of the Shield are you referring to? Generally are you referring to that portion south of Great Slave Lake?

MR. HEFFERNAN: We are talking mainly of the area extending - I am not sure from this map exactly where the Shield ends or where we start running into the sedimentaries, but generally up through this section here.

THE CHAIRMAN: That is between Lake Athabasca and Great Slave Lake?

MR. HEFFERNAN: Yes, that is correct.

THE CHAIRMAN: What about north of Great Slave Lake?

MR. HEFFERNAN: I think from that we can begin to run beyond the economic limits of transportation. I think that probably a maximum of 700 to 800 miles of rail haul is about all you can stand on rail haul even below 8 cents a ton mile.

THE CHAIRMAN: You mentioned a cent a ton mile. You say that is common in Canada and in the United States.

MR. HEFFERNAN: Yes.

THE CHAIRMAN: Does that apply where the railway carries the iron ore in one direction and



then carries an empty train back?

MR. HEFFERNAN: Yes, it does. A particular rate to which I can draw your attention is the one from Steep Rock to the head of the lakes, and I believe in that case the - I am not quite sure of this - I think the principal commodity moving over that line in that direction is ore. It is not a question of back haul; they go down there full and come back empty.

THE CHAIRMAN: How long a trip is it?

MR. HEFFERNAN: I believe the distance there is 143 miles, but I am not sure of that. But I know it is over 100 miles.

THE CHAIRMAN: Say about 140 miles.

MR. HEFFERNAN: Yes, I believe that is correct.

THE CHAIRMAN: And what is the rate?

MR. HEFFERNAN: Again I am taking this from memory and I would have to check it for you, but I believe the rate in there is just on the line of a cent a ton mile.

THE CHAIRMAN: Would you mind if Mr. Feehan, the Commission Counsel, gets in touch with you about that?

MR. HEFFERNAN: Yes, I can check it for you and I can check it very easily.

THE CHAIRMAN: Is iron ore easier to carry than lead-zinc concentrates might be?



MR. HEFFERNAN: No, I wouldn't say so.

The major difference there is that iron ore is normally moved in train load lots, and they will take a 3,000 ton haul, and it is somewhat unusual for a lead-zinc mine to be turning out 3,000 tons of lead-zinc. It would be a very large lead-zinc to do that, whereas with any sort of a smelting operation it is not unusual to require 1,500 or 3,000 tons of iron ore a day, and I think that is the major difference, that with iron ore you can move train load quantities.

COMMISSIONER GAINER: Mr. Heffernan, you mentioned a possible interest in further exploration of iron ore deposits or possibilities. How pressing is the need in Alberta to delimit further reserves, would you say?

MR. HEFFERNAN: I don't know what you mean by "further reserves". Actually other than the Peace River ore which we hold and have done considerable work on and which are very substantial reserves, material which runs 35 per cent iron, the indications are that we can make a concentration of this material but probably not as good a concentration as we would like to see. I believe that if a high-grade concentrate at an economic price was available in this area it would bring the day of an intergrated steel industry in this section quite close.

COMMISSIONER GAINER: You mentioned the



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possibility that you could be interested, given transportation, in doing more drilling and exploration on the Lake Athabasca deposits. I am just wondering, in terms of scrap supplies, how pressing it is.



MR. HEFFERNAN: I think as far as the industry as it exists today is concerned that scrap supplies are adequate to service the industry, but so far as further expansion of any size is concerned there is not sufficient scrap, and before any such expansion can be carried out a source of iron ore must be found. Now, do not misunderstand me; the Peace River may be it, with further metallurgical work, and so on. We may find that this material would be quite satisfactory for blast furnace use. We know it would be satisfactory if we had a high grade concentrate to mix with it at the present time.

COMMISSIONER GAINER: Is there any such concentrate in sight in the western regions, either here or in the United States, at the moment?

MR. HEFFERNAN: There are such concentrates available at Dillon, Montana. Again, it is a question of economics, and, again, it is a question of the desirability of developing an American iron ore source for a Canadian operation. This has been done in the past. As a matter of fact the whole steel industry in Hamilton was entirely dependent upon United States ores. I think most of us as Canadians would prefer to see a Canadian source of raw material.

COMMISSIONER GAINER: But it is a possibility that that ore could be used to alleviate the Peace River ore situation?



MR. HEFFERNAN: I would say it is more than a possibility; it is a question of economics, again. The haul from Dillon, Montana, is quite substantial, and it is a question of whether with any blending with Peace River ore we can come up with a price that would be competitive with eastern manufacturers.

COMMISSIONER GAINER: That is what I was wondering. Would that appear to be an unusually long haul for the industry from Montana in terms of the proportion you would be mixing?

MR. HEFFERNAN: It is right on the borderline. It is just around 800 miles, and it is pretty much of a borderline situation. It means a freight rate of up to around \$8 a ton.

COMMISSIONER GAINER: It means your supplies would fall somewhere in the distance between Clear Hills and Edmonton and Montana and Edmonton?

MR. HEFFERNAN: Yes.

COMMISSIONER GAINER: Would it be fair to say that the industry is just at the moment more or less teetering on the edge of moving into iron ore supplies if it is going to expand at all? The scrap in sight is ---

MR. HEFFERNAN: Well, I would put it this way, that the availability of smelting grade ores would certainly bring in expansion that might be under consideration much closer to fruition.

COMMISSIONER GAINER: How do you feel



about that same thing from the point of view of marketing a wider variety of shapes and products?

MR. HEFFERNAN: Well, in the iron and steel conference that was held in Edmonton Mr. Janes of the Bureau of Mines in Ottawa gave quite a good outline of markets in western Canada. It was his conclusion that there was, or would be very shortly, sufficient markets available to justify an integrated steel industry in western Canada. He did not say where, but he did -- as a matter of fact, his paper would be available to you through the Research Council if you are interested in that.

COMMISSIONER GAINER: Yes, I think I have asked them to send me one. That was the last conference here about three weeks ago?

MR. HEFFERNAN: Yes, that is right, and he gave quite an excellent summary of the market situation at that time.

COMMISSIONER GAINER: And that would definitely require the bringing into use of iron ore from fairly close at hand -- let us say, within 700 miles?

MR. HEFFERNAN: Yes.

COMMISSIONER GAINER: Is that about the limit of it?

MR. HEFFERNAN: I would think the economic limit would be somewhere in that order, yes. Of course, it depends a lot on the type of ore, and how high a grade of concentrate you can make of it, and so



on. If it is a surface mining deposit and a really cheap mining show you can afford to move it further than you can if it is low grade and expensive to mine.

THE CHAIRMAN: With regard to the Clear Hills, Mr. Heffernan, do you feel that that is adequately serviced now by the rail line that is up there?

MR. HEFFERNAN: I have discussed that with the railways, and they would be prepared to run a spur in from the existing main line. It would be a matter of about 25 to 30 miles. It does not go in the direction, unfortunately, that would be required to take it right up to Pine Point. It would go almost due west -- it would head almost due west of the existing line. But, they are quite prepared with the usual guarantees as to tonnage, and so on, to build a rail line there, so I would say that the situation is satisfactory as far as rail service goes.

THE CHAIRMAN: You said in the third paragraph of your letter that the route through Grimshaw would exclude the Uranium City-Beaverlodge area.

MR. HEFFERNAN: By that I mean it would exclude it from this closer contact with the railway which would be obtained by the eastern route.

THE CHAIRMAN: We have heard some discussion as to what extent the eastern route would help transportation with regard to Uranium City. I would like to know what you have to say about it.

MR. HEFFERNAN: I am assuming if the railway



follows this eastern route that somewhere in here probably an all-weather highway would be taken into Uranium City, and if that were done it would mean that we could probably make all-year-round shipments into Uranium City fairly economically, whereas now the truck haul would be more than double that. I do not know what the chances of getting an all-weather road in there are, in any event.

THE CHAIRMAN: But you regard it as being important, do you, that you can make all-year-round deliveries?

MR. HEFFERNAN: I think it is awfully important from our standpoint, and from the standpoint of the mining industry itself. You see, what happens is this, that during two months of the year they have to move in -- approximately two months; perhaps it is three months -- they have to move in all their supplies for a twelve-month period, and then prior to that period of moving in we have to build up our stocks, our inventories of grinding balls, and so on, that we ship in to them. We have to have them ready for shipment when the shipping season opens, so it means quite a burden to us in carrying inventory up until the time they are shipped, and it means quite a burden to them in carrying the inventory between shipping seasons.

THE CHAIRMAN: Would you tell us approximately the value of the iron and steel products that go into the Uranium City-Beaverlodge area each year?



MR. HEFFERNAN: I do not want to disclose too much to our competitors, but I would say that our shipments alone this year will probably run in the neighbourhood of \$1 million-worth of material, and, of course, we are only one steel company shipping in. I think probably the total would be more than like double that. Perhaps I do not give our competitors sufficient credit.

THE CHAIRMAN: The total is somewhere in the neighbourhood of \$2 million?

MR. HEFFERNAN: Yes, I would say in the neighbourhood of \$2 million or \$3 million of steel products. I think if you simply look at that in regard to interest charges that it is -- the carrying charges for interest alone on that inventory run approximately \$150,000 per year.

THE CHAIRMAN: Yes, if you keep it for all the year.

MR. HEFFERNAN: Yes.

THE CHAIRMAN: Suppose you are shipping steel products in there every month of the year would you ship in about the same quantity one month as you would another month, or does more go in at one time of the year than at another?

MR. HEFFERNAN: We now service the cement industry in Alberta and in Saskatchewan, and it is quite normal for us to take yearly orders and then give them so much per month during the year, and



schedule our production according to their requirements. There is a variation with them, of course. They do not run as much cement during the winter as they do in the summer, but in the mining industry I think they run on a pretty steady basis. They try to maintain steady operations at their mills, so I would say that in regard to all-year-round shipping we would ship on a pretty regular basis every month to them.

THE CHAIRMAN: You would ship about the same quantity one month as any other?

MR. HEFFERNAN: Yes.

THE CHAIRMAN: Do you think there would be any more building or construction going on in the summer time than in the winter which would require a little more?

MR. HEFFERNAN: Yes, but I am not talking about construction steels. In discussing that I think I have assumed the mines are in place and are operating. What I am talking about are the steels consumed in production.

THE CHAIRMAN: Each ton of ore mined represents a consumption of from seven to ten pounds of steel?

MR. HEFFERNAN: Yes, grinding balls, grinding rods, mill liners, crusher jaws, drill steel, etc., and, of course, there are miscellaneous steels and bars, and so on.

THE CHAIRMAN: About how many tons is



represented by \$300 million-worth of steel products -- how many tons of freight?

MR. HEFFERNAN: Roughly 15,000 tons, I would think. The higher grade steels --drill steels, and so on; I am taking a rough average of \$200 a ton, but it might be higher than that because of the drill steels.

THE CHAIRMAN: Would you say that that 15,000 tons of steel products go yearly into the Uranium City area?

MR. HEFFERNAN: Yes, I would say so.

THE CHAIRMAN: And would you think about the same quantity goes into the Great Slave Lake area each year?

MR. HEFFERNAN: Great Slave Lake is somewhat less than Uranium City at the present time. However, I think a fair figure for the two of them, taking into consideration the variation in price -- you see, we do not supply drill steels; other people do that. I would say that a fair figure for the two areas would be 10,000 to 15,000 tons each year.

COMMISSIONER THOMSON: With regard to this iron ore that is in the deposit at Dillon, can you use that as it is? I mean, is it a good ore?

MR. HEFFERNAN: It is a good concentrating ore. It runs about 30 per cent iron, and it makes an excellent concentrate. There are other ores in Montana besides the deposit at Dillon which are good



concentrating ores.

COMMISSIONER THOMSON: But they would not necessarily have to be mixed in with other ore to make steel, say?

MR. HEFFERNAN: No.

COMMISSIONER THOMSON: You could make steel with them?

MR. HEFFERNAN: Yes, you can make steel with them as they are.

COMMISSIONER THOMSON: I am still trying to get the economics of this. Why would you ship up good ore to mix with poor ore if you can use it in its present state? What is the economics of having a good ore to mix with a poor ore?

MR. HEFFERNAN: The main thing there, sir, is the freight difference. Dillon is approximately 800 miles away, and the Peace River is 400 miles away, do you see, and there is a difference of about \$4 a ton assuming that the mining cost ---

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COMMISSIONER THOMSON: But that is not the question I am asking. I mean, why do you have to mix poor ore in with a good ore? Are you not just keeping a ton of good ore out every time you put a ton of poor ore in?

MR. HEFFERNAN: No. It is a matter of economics. You can use a certain amount of impure ore in blast furnaces quite economically. The thing is you need a minimum grade to operate a blast furnace, and the object is to achieve that grade at the lowest possible cost per iron unit or per pound of iron or per pound of Fe.

COMMISSIONER THOMSON: Is it necessary to put a low grade ore into a furnace in order to make good steel?

MR. HEFFERNAN: No. It is strictly a matter of economics.

COMMISSIONER THOMSON: Then I still maintain that every ton of poor ore that you put in you keep out a ton of good ore, and if the good ore will make steel on its own account, I am still wondering why you want to mix a poor ore in.

MR. HEFFERNAN: Well, let's look at it this way: suppose a ton of so-called good ore costs \$20.00 a ton, laid in, and suppose a ton of this leaner ore costs \$10.00 a ton - you see?

COMMISSIONER THOMSON: I get it.

MR. HEFFERNAN: The basic thing there is



if your lean ore is cheap you try to use it and you can make it usable by blending it with a high grade material, but naturally you use as little of the \$20.00 a ton material as you possibly can.

COMMISSIONER THOMSON: That report of Dr. Donald J. Kidd in the Northern Miner on the type of ore at Clear Hills, is that approximately right? Is it pretty close to what you yourself - or are some of these figures you have given him yourself, possibly?

MR. HEFFERNAN: We made our reports available to Dr. Kidd. I think we concur pretty well with his findings up there. We have done more work on it since and possibly we know a little more about it than he did at the time of his report.

COMMISSIONER THOMSON: Would you say they are essentially correct?

MR. HEFFERNAN: Yes. I see Mr. Edgar is here, and he has done some work for us. Would you say that is right, Mr. Edgar?

MR. EDGAR: Yes. The question of grade is one on which we have obtained a little more information since his report was written, since his work was done.

MR. HEFFERNAN: But as to potential tonnages and grade, I think the material that he has presented is certainly pretty much the way we see it; in other words, 35 per cent iron is pretty close.



MR. EDGAR: That is the way we see it at the present time.

COMMISSIONER THOMSON: Is that iron ore at Lake Athabasca you mentioned on Black Lake?

MR. HEFFERNAN: Yes, that is correct, on Black Lake.

COMMISSIONER THOMSON: Could you not get it out cheaper at Lynn Lake, or, as far as that goes, it is not too far from the Hudsons Bay itself?

MR. HEFFERNAN: I think the problem there is one of distances. If you run it to Lynn Lake and the nearest potential market at Winnipeg, the Steep Rock ore would be cheaper to transport.

COMMISSIONER THOMSON: Would the Black Lake area be an area that you would prospect in looking for ore?

MR. HEFFERNAN: Yes. I think if an eastern route were declared for the railway we would start looking at some of these known deposits right away, and I think that we would also do some prospecting for other deposits in that area.

COMMISSIONER THOMSON: How far do you think you could truck it to the railway? Supposing you found ore at Uranium City.

MR. HEFFERNAN: No, you couldn't truck it that far.

COMMISSIONER THOMSON: Then you would have to extend the railway into wherever your iron ore is



found.

MR. HEFFERNAN: Yes. Just as we are on Peace River: we have to consider expanding the railway 25, 30 miles into that deposit.

COMMISSIONER THOMSON: You think it would be cheaper for Steep Rock at Lynn Lake?

MR. HEFFERNAN: That is a possibility. The haul from Steep Rock is approximately 1,100 miles. I think that we would have to, with the established railway as it is across there, consider building a spur in. I think we would have to stay within our 700-mile limit which we have discussed previously.

COMMISSIONER THOMSON: And you would be smelting this at Edmonton.

MR. HEFFERNAN: That would be our plan, or in the Edmonton area, I believe, yes.

COMMISSIONER THOMSON: There would be very little likelihood of getting iron ore within 700 miles of Edmonton, or would there? If you went north of Uranium City you would be at least 700 miles, would you not?

MR. HEFFERNAN: I think we are not too far off our 700-mile limit there.

COMMISSIONER THOMSON: You wouldn't think it could be, say, put on the water at, say, Stony and brought up by barge, or do they manage to barge iron ore successfully?

MR. HEFFERNAN: Yes, iron ore is barged



successfully throughout the Mississippi and so on, in the United States. However, that is an all-year-round system and the mills are located normally right on the waterways. Here it would mean we would have to trans-ship, rehandle wherever we met the railway, and we would be limited again with the very short season, which would mean we would have to have large inventories.

THE CHAIRMAN: In any case, you would have to have a railway right at the source of the ore at every place.

MR. HEFFERNAN: Yes, that is right.

MR. FEEHAN: I think the distance of 700 miles would be anywhere within a radius of 150 miles of Fort Smith.

COMMISSIONER GAINER: Perhaps this is unfair to you a bit. I was interested in the geology of the deposits a bit. Is there anything from the point of view of the geology of the area in which it is found, is there any likelihood that that same kind of thing may turn up in the western section, say in the sedimentary western portion?

MR. HEFFERNAN: I am afraid I will have to bow out of that. I am really not qualified to answer it.

COMMISSIONER GAINER: I am wondering what type of structure is found in there.

MR. HEFFERNAN: I am afraid I couldn't



answer that. Perhaps you could, Mr. Edgar.

MR. EDGAR: My understanding is that it is in the Pre-Cambrian.

THE CHAIRMAN: You are limiting your area to a relatively small part of the Pre-Cambrian, are you not, as to where you might possibly find iron ore?

MR. HEFFERNAN: Yes, I think that is true, we are. It is certainly a matter of this whole distance problem.

THE CHAIRMAN: You think this 700 miles is as far as you - -

MR. HEFFERNAN: It might be 800. It would depend on the deposit. If you had a really good high grade concentrate you might be able to move 900 miles.

THE CHAIRMAN: So for a high grade deposit you might easily take in part of that area lying between Great Slave Lake and Lake Athabasca.

MR. HEFFERNAN: Yes, I think that would be correct, either a high grade iron ore or an ore that would make a concentrate of 60 per cent iron, and if such ores have been found, that it might become feasible. I am taking my 700 miles; I was taking something around 35, 60 per cent, which you would normally expect to find.

THE CHAIRMAN: But you don't feel you would be limited to that.

MR. HEFFERNAN: No.

THE CHAIRMAN: Would you mind getting



back to the Clear Hills area for a few moments?

Suppose that had developed, would you expect to concentrate the ore in the Clear Hills area?

MR. HEFFERNAN: Yes, we would. The Clear Hills ore runs approximately 35 per cent Fe. and approximately 20 per cent silica. In order to smelt it successfully it must be concentrated. We can get it up to about 55 per cent iron and at least laboratory tests have indicated we can get it up to 55 per cent iron. We would like to see better percentages than that, and we are doing work on it at the Research Foundation, and they haven't come up with anything too promising yet.

THE CHAIRMAN: The concentrating process would take place right on the property.

MR. HEFFERNAN: Yes.

THE CHAIRMAN: Is that the type of thing that would lead to other industries around it?

MR. HEFFERNAN: Not necessarily, no. We would utilize some of the gas up there probably in concentrating. Perhaps as a result of a fairly large development you might see some small machine shops, repair shops, start up, service industries, and so on, but I don't think it would lead to anything of a major industrial nature.

COMMISSIONER THOMSON: Did you say you were anxious to find ore in the Pre-Cambrian Shield,



in that general area between Lake Athabasca and Great Slave Lake?

MR. HEFFERNAN: No, I don't I believe I said that. I said that we considered it a likely area in which we might find ore, and if we could find a good concentrate grade of ore in there or a good shipping ore it would be attractive to us from the point of developing an integrated steel industry in the province.

COMMISSIONER THOMSON: Are you actively prospecting there now?

MR. HEFFERNAN: We are not, because there is no transportation.

THE CHAIRMAN: If you found it, don't you think you would get transportation? Most other iron ore bodies did.

MR. HEFFERNAN: Yes, I think that is true. I think it is a matter of the gamble involved. It costs quite a lot of money to put a proper prospecting party in the field and do drilling, and so on, and it is pretty hard to convince a board of directors to do that when there is the present type of transportation and doesn't show much hope of transportation developing.

I think the situation in the Labrador Trough was quite different. There you had people who were considering tonnages which, in themselves, would justify a rail line, and therefore when they



built that line of 300 or 350 miles, once they had the ore, why, it was quite feasible to do that. But in our case the quantities that we are talking about are perhaps 600,000 or 700,000 tons a year, and you can't build a 300 or 400 mile railway on that basis.

THE CHAIRMAN: 300,000 or 400,000 tons of concentrates?

MR. HEFFERNAN: No, I said a 300 or 400 mile railway. I am talking about 600,000 or 700,000 tons per year.

THE CHAIRMAN: That is what you would hope if an iron mine were found.

MR. HEFFERNAN: That is correct.

COMMISSIONER THOMSON: Did you say 600,000 tons?

MR. HEFFERNAN: 600,000 to 700,000 tons per year. That would be pretty well the minimum of an integrated industry to work to. That represents the consumption of one blast furnace.

COMMISSIONER THOMSON: But you say at the present time there is no effort to find it.

MR. HEFFERNAN: That is right.

COMMISSIONER THOMSON: Don't you think if you had 600,000 or 700,000 tons you would have a good talking point for getting a railway?

MR. HEFFERNAN: It is the question of transportation, and that is why we have been working on the Peace River; there is transportation



there within a reasonably close distance, and we have been working on that in the hopes that we would come up with the metallurgical answers which would justify that deposit.

COMMISSIONER THOMSON: It is possible to find the particular type of ore in that country; it doesn't have to come from the Pre-Cambrian Shield to make a mix you are looking for.

MR. HEFFERNAN: Our hope in this area we are working in is that we will come up with a concentrating technique which will make that ore quite feasible for blast furnace use, and that is the direction in which we are working. We do not have much hope of finding a high grade ore in these areas because of the geological nature of them.



COMMISSIONER GAINER: Can you tell us something about the Burmis deposits -- the distance, the type, and how they might have fitted into the range of operations?

MR. HEFFERNAN: The Burmis deposits are a high titanium iron. They represent quite a difficult mining proposition. I believe at the present time there is only one process that can use the Burmis ores satisfactorily, and that is the electric smelting process. With the availability of good coking coals in Alberta and cheap natural gas for reduction I do not believe that electric smelting is the most economic method of getting into the integrated steel industry in these province.

COMMISSIONER GAINER: It has not been a question of distance?

MR. HEFFERNAN: No, it is not particularly a question of distance; it is a question of the quality of the ore, primarily. The high titanium makes it absolutely out of the question for blast furnace operation.

THE CHAIRMAN: Would this be a good time for the adjournment? Would you like to discuss with Mr. Feehan any cross-examination you may have, Mr. Fouks?

MR. FOUKS: I have no questions, my lord.

THE CHAIRMAN: Then, I do not think we have anything more to ask you, Mr. Heffernan. Thank



you. We will adjourn until four o'clock. The reason I suggest four o'clock is that I believe I can get in touch with Dr. Sproule who is coming tomorrow, and I hope we will know by then at what time he will be here. You wanted to make some suggestions as to witnesses, Mr. Fouks?

MR. FOUKS: Yes, Mr. Chairman.

THE CHAIRMAN: Would you like to make them now, or after the adjournment?

MR. FOUKS: I can make them after the adjournment.

THE CHAIRMAN: Very well.

---Short recess.

THE CHAIRMAN: Gentlemen, we will adjourn now until eleven o'clock tomorrow morning at which time I hope that Dr. J. C. Sproule will be up from Calgary. Before we do adjourn I think, Mr. Fouks, you wanted to give us the names of one or two people you suggest we might ask to come.

MR. FOUKS: Yes. Dr. J. C. McGleynn, but, preferably -- and I think they are both in the same department -- Dr. Stockwell. They are both in Ottawa.

THE CHAIRMAN: Dr. Stockwell or Dr. McGleynn?

MR. FOUKS: Yes, they are both in the Department of Mines and Technical Surveys, Ottawa.

THE CHAIRMAN: You suggest one or the other?



MR. FOUKS: Yes, I do not think it is necessary to call both. Dr. Stockwell is the senior man and the head of his department. He is one of the leading men in Canada. I am not sure when the next sitting of the Commission will be after tomorrow. We will not be present tomorrow morning, and I am wondering if there is any additional information you might have at present.

THE CHAIRMAN: Well, we do not know. As I say, we hope Dr. Sproule will be here. There are one or two others we hope to arrange to have come and give evidence, and we do not know when that is going to be possible. We think, perhaps, representatives of the railways may be back, but we do not know when that is likely to be. We are anxious to get on with writing our report as soon as possible, so anything we can do to expedite matters we will certainly do.

MR. FOUKS: Could we, in Vancouver, be advised, particularly if the railways are coming, because we would like to return for any hearings and we would like as much notice as possible so that we can return at that time.

THE CHAIRMAN: I will make sure I have the telephone numbers of all of you.

MR. FOUKS: MU 2-1355 is my office.

THE CHAIRMAN: If we leave a message there it will be satisfactory?

MR. FOUKS: Yes, and my telephone number



at home is AM 1-6532.

THE CHAIRMAN: We will do our best to be sure that you know all about it as soon as we know ourselves. Mr. Grimble, would you like to be advised also?

MR. GRIMBLE: Well, Mr. Bishop would, my lord.

THE CHAIRMAN: We will get in touch with Mr. Bishop and let him know what we are doing. We will adjourn now until tomorrow morning at eleven o'clock.

---Adjournment.

ROYAL COMMISSION
ON
GREAT SLAVE LAKE RAILWAY

HEARINGS

HELD AT

VOLUME No.: 24

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ROYAL COMMISSION ON
THE GREAT SLAVE LAKE RAILWAY

Hearings of the Royal Commission
on the Great Slave Lake Railway
held at the Court House, Edmonton,
Alberta, at 11.00 a.m., October
30th, 1959.

PRESENT:

MR. M. E. MANNING	Chairman
DR. WALTER D. GAINER	Member
MR. JOHN ANDERSON-THOMSON	Member

MR. FRANCIS M. FEEHAN	Counsel
MR. A. PATERSON	Secretary



SUBMISSION BY

Dr. J. C. Sproule

THE CHAIRMAN: Dr. Sproule, I think you have had a good deal to do with the north country from the time you were very small until now.

DR. SPROULE: Yes, I have; I was brought up in that country. I have worked there in the last seven years for oil companies on a consulting basis.

THE CHAIRMAN: That is doing geological work.

DR. SPROULE: Yes.

THE CHAIRMAN: And that has taken you right into the Arctic Circle, has it not?

DR. SPROULE: Yes. We had parties last year, which was our biggest year; we took fourteen parties into the Arctic and straddling the Arctic Circle, involving, say, about 55 to 70 men and 8 to 10 aircraft during the last summer. So we were very busy in the Arctic last year.

THE CHAIRMAN: That is your own organization?

DR. SPROULE: Yes, working for 10 or 12 different oil companies.

THE CHAIRMAN: And you have been doing that type of work, haven't you, all the way from Calgary right to the Arctic Circle?

DR. SPROULE: Yes. I have done it from



the Montana border and up through north-east British Columbia; we have had parties all the way from the Montana border all the way to the Arctic Ocean.

THE CHAIRMAN: I think you first went into the north country before the railway was built when you were very young.

DR. SPROULE: Yes, at the age of 5. As a matter of fact, I was introduced at a professional engineers' meeting as having been born in the Peace River country, and if I had been born in the Peace River country I would have been an Indian, because the first white child was born there after we went to the country.

THE CHAIRMAN: What part of the country?

DR. SPROULE: Grande Prairie.

THE CHAIRMAN: And that is where you grew up.

DR. SPROULE: Yes, I grew up near Grande Prairie, and my dad, being a dentist, was called upon to visit Peace River and Hudsons Hope, Dunvegan, and all over the place. So I became fairly well acquainted with what we call the north country, the Peace River country, at that time.

THE CHAIRMAN: You are familiar with the proposed routes for the railway. One has been proposed from Waterways up to Pine Point, and the other from Grimshaw up to Pine Point.

DR. SPROULE: Yes, I am.



THE CHAIRMAN: We would be interested in knowing your opinions as to the merits of those two proposed routes.

DR. SPROULE: Well, sir, I never crystallized them or, at least, made any attempt to crystallize them until we talked yesterday, and I just summarized my thoughts on the alternative routes this morning on the plane on the way up. So I think the main ideas are there although they may not have been too completely developed.

The ideas that I have are based on what I assume is the prime consideration, that is the opening of the natural resources and opening up of the country with particular reference to natural resources, and as a geologist I would look upon the natural resources of northern Canada as being divided to agriculture - can I point out on a map? I think I can illustrate it best in terms of reference to this map.

THE CHAIRMAN: I think perhaps that can be folded back, can it?

DR. SPROULE: Yes, I see. As it is hard for a Frenchman to work without his hands, it is hard for a geologist to work without a map.

I think the prime consideration from your point of view is that - -

THE CHAIRMAN: We are looking at a map of Canada now.



DR. SPROULE: Yes, this is a map of Canada. From the standpoint of the development of the entire north country and western Canada - I should say, first of all, from the standpoint of natural resources you should break this western Canadian basin at a line at southern Manitoba, across the north-eastern corner of Saskatchewan, the corner of Alberta and up through the territories.

THE CHAIRMAN: Are you cutting past the west side of Great Slave Lake?

DR. SPROULE: I am cutting Great Slave Lake right through the middle.

THE CHAIRMAN: Is there a map over here which would be more useful?

DR. SPROULE: Yes. As a matter of fact, I could leave you one here, because it shows that - as a matter of fact, that would be a good one I could leave with you.

THE CHAIRMAN: If we could have that map as an exhibit, Dr. Sproule, it would be very helpful.

DR. SPROULE: Yes. This map illustrates the Pre-Cambrian Shield in terms of natural resources. It is a mining area.

In terms of agriculture, non-metallic sources of energy such as coal, oil and gas, the areas shown in green, bounded on the east by the Pre-Cambrian Shield and on the west by the Rocky



Mountains, are your main areas from the standpoint of agricultural development and the spreading of human culture. What I wanted to illustrate particularly is that this is your main source of hydrocarbon energy through the same area that is the prime source of agriculture products. That leads to an important consideration, one important consideration, which shows that a railway with respect to this Pre-Cambrian mining area is a potential for opening up the mining areas that you would not get in any other way.

Now, the oil and gas industry doesn't need a railway; it is so convenient for them to develop their pipelines that they can get their material out without the necessity for railways, but a railway as close as possible to that Pre-Cambrian mining shield - right now, for example, you have developed, in spite of the difficulties, mining resources, gold fields and at Pine Point, gold fields in Saskatchewan here and at Pine Point in the Northwest Territories. So that a railway that parallels this permits spur lines to the mining areas.

Now, the points that I am going to summarize that I summarized this morning relate then to this sedimentary basin, which is the main source of spreading of agriculture, future agricultural areas, and that is something that you might not - generally you don't think that of agriculture in terms of the



lower Mackenzie basin, and I would just like to give you an idea in a minute of what the potential is.

I took some pictures at Fort Good Hope last summer, and the cabbages are that big.

THE CHAIRMAN: That is over a foot in diameter?

DR. SPROULE: No, say 10 inches, and I have a little photograph that I can - as a matter of fact, I have some very nice photographs that I will send you as an exhibit, if you like, cabbages and cauliflowers and plants that were still blooming in September. Now, that is in the Arctic Circle.

Now, with that background of terrain and natural resources, I just might summarize what I thought this morning as the pros and cons of the Grimshaw and the McMurray routes.

Let's take, first of all, the Grimshaw route. On the Grimshaw route, those cons, if you like, or those arguments against it, as I see it, on the Grimshaw route would not add greatly to the development of a country that already has a good highway running through it, an excellent highway that is well-serviced. If 20-ton trucks can bound over it, those fish trucks from Hay River, then it can stand up to a pretty good traffic load. A second argument against it is that they already have traffic.

Now, in terms of advantages, as I see it, it is the cheapest route, it would be the cheapest



route in terms of a railway; I don't think there would be any question about it, it would be much the cheaper of the two. In the second place, it provides cheap transportation for grain, agriculture, that is already established as a business. In the third place, it would add, to some extent, to the opening of larger areas for agriculture. The assumption is that if road transportation, with its slightly higher freight costs, will develop an area of unit size A, then obviously improved transportation will permit extension of agriculture into wider areas.

There are others, but those are the two and three pros and cons of the Grimshaw route.



The arguments against it, as I summarized them, are (1) it may be a slightly more expensive route to initiate in terms of ultimate pay-out. It might be better, but it would be a slightly more expensive route to initiate.

In the second place it supplements water transportation, but water transportation is, as I see it so unreliable or so costly -- it is unreliable and costly; if you are going to dredge then dredging might obviate its unreliability and it might become reliable, but only with costly dredging. On that point you might wonder if the cost of the dredging might build you a railway.

It is short-seasoned. One of the gentlemen this morning explained that it was about from the middle of May to the middle of October, which is five months. The other seven months are a rather difficult proposition, and if you are going to open up a new country I would imagine that the inhabitants -- well, they do not need it, but it helps things much if they have a twelve-month access route. In any event, it would not be quite so much use to an active growing community.

The advantages of the McMurray route very briefly -- and again I am looking at it from the standpoint of natural resources and development of new communities -- are (1) it opens up entirely new territory. I am going to come back to that in a



minute because I do think that there are aspects in regard to agriculture in the north country that have to date been overlooked. I would like to put an asterisk against that and come back to it. It opens up new traffic by opening up a well-spaced traffic artery, and by "a well-spaced traffic artery" I mean one in an area where there is not one at present. (2) It will permit development of agriculture along an area that is fairly well drained and which I believe can be made into agricultural territory with relatively little experimental work.

I have brought along some illustrations of the terrain, or some photo-mosaics of that part of northern Alberta along and adjacent to the route, and you can see on the photographs the difference between -- you can tell that area which is well drained by the streams; you can tell that area which is so well drained as to producedeciduous trees -- that is, poplars and that sort of thing, and those poplars can be cut down and you can grow agricultural products anywhere where there are poplars. Where there are pine, the same thing applies. Where there is spruce then that is acid soil, and it requires treatment and drainage, and quite a bit of the area would not be immediately suitable for agriculture, but it could be after it is properly drained.

These were prepared for a client so I cannot leave them, but if you would like them on the record I



would be happy to have reproductions made of these photo mosaics showing the terrain in terms of different types of soil and areas along the route, and make them available to you.

THE CHAIRMAN: We would like very much to have them, Dr. Sproule, thank you.

MR. SPROULE: That was point No. 2. Point No. 3 is ---

THE CHAIRMAN: Before you go on to that, you mentioned an area that looks good for agriculture along the proposed route from Waterways. Would you take the whole of the area from Waterways up to Peace River, or would you go north of the Peace River again?

MR. SPROULE: Well, actually, the same thing applies along this route as applies over here. This idea of expansion of agricultural potential is not greatly different from that on the other route except for the presence of this traffic artery in an area that has not been used at all for agriculture, and it means that percentagewise with little effort you could probably get more here than you can along that route. It is fairly well drained and the area could be opened. I would say a large area of around a million acres could be opened more easily than a new million acres there. In any event, this area will open gradually. Although you may impose a slight hardship on the farmers who are already there you are opening a new territory here that has not



previously been given consideration.

I do not think I quite answered your question. I would not say that all of that could be opened up for agriculture. There are big muskeg areas in it which you would not bother to touch, but the higher areas and the slopes over one-third of the area could be opened up with relatively little effort.

THE CHAIRMAN: That is all the way from Waterways north as far as the Peace River?

MR. SPROULE: From Waterways to Lake Clair and from Lake Clair across here you have a great deal of low muskeg area which I would not imagine could be opened for some time. There is a block there that is just about as bad as that from -- well, in this area here. Here is another bad one, and another bad one is right in this area here. When you get back into the Hay River area, in this white area here, away from the Muskeg, then you find that is high rocky land that is suitable except that there is no soil on it. It is well drained and there are deciduous trees there, but it is rocky and has very little soil on it.

THE CHAIRMAN: The area you are referring to now is the area immediately south of Great Slave Lake?

MR. SPROULE: Yes, the area is south of Great Slave Lake in a band -- there is a limestone band that extends from the Slave River around the



Great Slave Lake and across to the Mackenzie. The new highway breaks off here, incidentally. The new highway is intended to add a couple of months to the transportation period on the Mackenzie. It cuts across from Alexandra Falls or Louise Falls to Mills Landing, and then cuts across that well drained area there.

The rest of this is low and never will be suitable for agriculture. There is a spot here, and another one here, but the main area that might be opened up would be a fairly large area between here ---

THE CHAIRMAN: Between Waterways and Lake Clair?

MR. SPROULE: Yes, and at places along the line. I do have mosaics of the entire route, but I do not imagine that they would serve any purpose other than being sample mosaics of this sort. Perhaps you would just like to take a look at it, and I will show you how to go about interpreting the agricultural and non-agricultural prospects. This one is just west of McMurray.

COMMISSIONER THOMSON: That is going down towards Athabasca?

MR. SPROULE: Yes, going down towards Athabasca; south to the Big Bend and south to Athabasca. That is practically all well drained territory with very little muskeg. That is a muskeg; you would never get anything in there.



Actually, quite a bit of the high land is potential muskeg, except once it is cleaned off and opened to the air and sun it can be used.

THE CHAIRMAN: A lot of it could be drained?

MR. SPROULE: Yes, once it is opened up by burning or otherwise its prospects are improved. There is another one further down just immediately to the west again; you can see the relationship of it there. It is another one entirely. It is away down below the McMurray area; I would say it is about midway between McMurray and Lake Athabasca, and it is off to the west.

THE CHAIRMAN: The Birch Hills area?

MR. SPROULE: Yes, and here again is an area that is very well drained and which could be opened.

THE CHAIRMAN: What are these lines?

MR. SPROULE: Those are geological features that have to do with local structure.

THE CHAIRMAN: That is not part of what was photographed?

MR. SPROULE: No, it is not part of what we are talking about here.

COMMISSIONER THOMSON: Is this glacial?

MR. SPROULE: Yes, that is right. Those are glacial gouges.

COMMISSIONER THOMSON: This is rock, is it?

MR. SPROULE: No, that is boulder clay of



the type that would provide your soil. When the glacier moved over it there were 5,000 feet of ice, and there were chunks of rock in the bottom which acted as chisels, and the movement of the ice across the land left those deep gouges.

COMMISSIONER THOMSON: And they stay; they do not weather away?

MR. SPROULE: No, they do not because of the burden of forestation. Once you have a heavy burden of forestation there is no erosion of the land along either the streams or the side streams.

COMMISSIONER THOMSON: From what height are these taken -- 30,000 feet?

MR. SPROULE: The photographs?

COMMISSIONER THOMSON: Yes.

MR. SPROULE: I believe the photographs were taken from 20,000 feet. They are of 1949 vintage and were taken for the Alberta Government.

COMMISSIONER THOMSON: Is there much timber in this country?

MR. SPROULE: That brings up another point I was going to mention.

COMMISSIONER THOMSON: These are trees, are they not?

MR. SPROULE: Those are timber trees.

COMMISSIONER THOMSON: Is there timber between these gouges? Is that timber?

MR. SPROULE: That is timber, and,



generally speaking, the light stuff is deciduous trees -- poplars and that sort of thing and small scrub. Your main timber areas are along and flanking the rivers and flanking the high areas. Those dark areas there are timber.

COMMISSIONER THOMSON: What about this white area -- is that poplar?

MR. SPROULE: Some of the white is burned over land -- no, that is muskeg.

COMMISSIONER THOMSON: I mean this place here -- that is timber?

MR. SPROULE: That is timber. Those are poplars, and that is poplar. There is a burned over area. This one here is burned over evergreen that is coming back.

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But it might be more suitable against the river. If you want them along the route, we can very easily give you samples of the terrain for your record.

THE CHAIRMAN: We would very much like to have a sample or two.

DR. SPROULE: Yes.

COMMISSIONER THOMSON: Is that the south bank?

DR. SPROULE: That is the south bank.

COMMISSIONER THOMSON: Is this bank high?

DR. SPROULE: The bank of the Athabasca there is about 200 to 300 feet.

COMMISSIONER THOMSON: The railway going down the side.

DR. SPROULE: The railway would go down here, down north. The railway would go north from Waterways, McMurray. I have selected a bad mosaic but it happened to be ready. This index map is where we are. We are talking about the railway passing across this terrain; McMurray is about here.

COMMISSIONER THOMSON: And this is going to Lake Athabasca.

DR. SPROULE: No, this is going upriver to Athabasca itself. The Athabasca River runs almost east and west. The railway would be at the side of the river here.

COMMISSIONER THOMSON: In other words, the railway wouldn't be near this part of the river.



DR. SPROULE: It would cross the river here at Waterways on to the west side and follow along the flank. I can give you a mosaic which is directly on the route and show the difference type of terrains.

I put myself off the track there.

THE CHAIRMAN: I interrupted you. You were talking about the agricultural possibilities.

DR. SPROULE: Yes.

THE CHAIRMAN: I was asking you what area you were speaking of.

DR. SPROULE: Patches all over the place, and you couldn't depend on any large continuous areas, because locally there are muskeg areas which are not practical to drain, but collectively there are areas suitable for agriculture.

It may be well to digress for a moment. I did some experimental work at Fort Good Hope a couple of years ago. I took down a culture which is developed for market gardens in the States, and this culture has a bacteria in it which grows, and when you put it in the soil it aerates it, fluffs it up and makes it grow faster in the soil to the point where the growing period can be shortened by 25 per cent to 33 per cent. So if you have a 4-month growing period and it reached maturity in three months, you would beat the frost. It is used extensively to increase the productivity of the soil. It is used the year round for market gardens, and I



tried it at Fort Good Hope and it did make - the experiment wasn't as complete as it should have been and it was never recorded, but it did show a distinct difference between the patch that was treated and the patch that was not treated, and, theoretically, use of - I am not suggesting - I don't even remember the name of it - I am not suggesting that particular culture would solve the ills of the north country, but agricultural research could be applied to the north country in such a way as to open up areas which we now believe or do not regard now to be of value.

THE CHAIRMAN: Would it be expensive to treat the soil?

DR. SPROULE: It would be fairly expensive to treat the soil, yes. But other types of research I am referring to is the removal of forest to permit the permafrost to recede, and if it comes to the surface it can't grow anything, but it has been found - and I think with this in mind you should go to some of your northern outposts to get accurate records of it - it has been found when the land is denuded of its insulation, moss and trees, the permafrost recedes downward. For example, at Fort Good Hope it would grow potatoes, cabbages and quite a bit of market gardening quite successfully. The permafrost receded by quite a number of feet, and the only thing that keeps permafrost at the surface is forest and moss insulation. In other words, it doesn't permit



it to heat up during the summer. At Fort Norman, for example, there are areas under the river where there is no permafrost. In any event, the study of permafrost is a science and with the application of experimental work it could change our concept of agriculture in the north country; and I am not talking of the type of agriculture which would feed the rest of the world, but that which would feed the people in the north country. I am not speaking of grain. Possibly later on we might be.

THE CHAIRMAN: Do you think there is reasonable prospect of the Mackenzie Valley, say, being a large grain-growing area?

DR. SPROULE: To human beings, anything is possible, and in our vision - we are so short-sighted that at any given time we tend to under-rate the future and under-rate research. I would say it is quite likely, but not in terms of two or three years.

COMMISSIONER GAINER: What about the prospects of the middle or lower Mackenzie Valley? Are there extensive areas which are topographically suitable, at least?

DR. SPROULE: There are extensive areas in the lower Mackenzie, yes. In the lower Mackenzie from Fort Good Hope practically down to the outlet on either side of the Mackenzie it is fairly well drained and there is very little muskeg, strangely



enough. There is very little in the way of - except for areas, there is very little that could be arable between Fort Simpson and north of Fort Norman. But beyond that from the ramparts, where the Mackenzie mountains cut east in the lower Mackenzie basin, from there down to the beginning of the Delta there are fairly large areas which are well-drained. At the present time one of our clients is drilling a well just below Fort Good Hope, and they are running a road; they put the drill in there during the summer by barge and they are now planning, by using these photo-mosaics, a road to drill this winter, and they are drilling an area which is fairly well drained and in which the road possibilities are good. Right now I think it is a winter road, but if they should get anything there would be very little problem for a summer road, because they have along that route a lot of ridges which provide gravel and - I wouldn't say no muskeg, but only small muskeg areas. It is an area of about 200 miles long, much of which could be made arable

This was number 2 point, agriculture, along the Athabasca.

Number 3 - I would say that the McMurray route would speed up the development of the oil sand. Now, the oil sand has long been a pet of mine, I may be regarded as being prejudiced in this respect, but I think my arguments are not because I have con-



firmed them. I worked in the Department of Mines in 1930 and have been very much interested in them since that time. I would say it would speed up the development of the oil sand, point (a), for road building; (b) for outside markets, for fuel oil and other liquid petroleum products; (c) for local markets, such as the development of hydro.

Now, this business of this road building, (a), I may just mention, as I did to you, sir, the other day, that the Mines Branch about 19 - I have written to Ottawa asking for the publication on it, but late in the teens or early twenties S.C. Ells of the Mines Branch put asphalt on the road along the Kingsway about 1919 and a 2-mile stretch at Jasper, and those two stretches of road have lasted longer than any other highway in Canada. In other words, there is something about that tar sand which has a mobility or flexibility against frost and ravages of time don't tear it apart as our normal highways are torn. As you know, the highways are very often politically built transportation lines which might be quite temporary. I think it could be a very fine thing, or it would be, if highways could be built much more permanently in order to obviate the necessity for repeated annual treatment and rehabilitation of the highways, which is particularly true of the north country. I do think that that is worth following up, the results of that experimental



work with the oil sands, because I do know that these two roads have lasted better and longer than any other road in Canada. I was associated with Ells; he did supervise the building of those two roads. From the standpoint of the outside market - -

THE CHAIRMAN: Before you leave the question of road building, is that material that is put on these two roads that you have referred to?

DR. SPROULE: It was put on as such.

THE CHAIRMAN: Is there some of that material which is now available to the railway which goes into McMurray, or must you build a bridge across the river to get at it?

DR. SPROULE: No, it is available, it could be used.

THE CHAIRMAN: Could it be used in its present form?

DR. SPROULE: Yes, it could be used in its present form.

THE CHAIRMAN: It doesn't require treatment?

DR. SPROULE: No.

THE CHAIRMAN: Would a railway in there do a great deal towards encouraging the use of that material for a road?

DR. SPROULE: Only in as much as possibly increased overall transportation.



The greater the traffic the cheaper your material can be moved, and I would imagine that a greatly increased traffic over that route would solve the problem of cheaper transportation for a commodity that requires very cheap transportation. It could be improved. Other than that it is physically available at the present time, but it is not being used as such.

It is just an idea, but particularly in an area like that where you have a number of different types of traffic -- you would have high class and low class traffic -- with any increase in traffic your low payload can be increased. The economics of a low payload are increased; that is what I mean.

It is a matter of outside markets for fluid products from the tar sands, and the local markets for energy, and those are two matters which possibly can be discussed together. In this regard I am referring again to an outside market which is already glutted so far as that is concerned at the present time, but a local future market is there, possibly, for energy and hydro that would be similar to the market for coal and other sources of hydro-carbon energy converted into hydro. As you know, hydro is a non-wasting energy but is very limited in its volume, so that once the available hydro is used up you cannot add to it. At that stage you have to use coal or some other types of hydro to add to your market, and I do know that investigations were



made a short time ago with the idea of using the low grade products from the tar sands for hydro development.

In other words, the economics of the tar sands at the present time, assuming that your pay-out of those products must be in terms of the fluid oil that is moving if there is a railway, and if the area were opened up, are that you could also have a market for the fine coking residue, as I believe it is called, that can be used for conversion into hydro, and assuming that a market for hydro power is available in the mining areas and in the towns along the route.

That may sound as if it is something that is well into the future, but I do feel in the building of a new road or the opening up of a new area, particularly one adjacent to that Pre-Cambrian mining area, the availability of a cheap source of hydro is a very important aspect of the situation in an area where hydro will be fairly limited. At the present time I believe there are hydro facilities, or will be hydro facilities, near McMurray up the Athabasca River at the rapids. Other than that I do not think it would be feasible anywhere else along the river. At the present time we only have Goldfields and Pine Point in terms of mining areas, but with an additional source of cheap energy that otherwise does not have a market that area could be opened up, or could be greatly assisted.



COMMISSIONER GAINER: Dr. Sproule, what form is this fine coking likely to take? How would it likely be transported and used in a thermal plant -- as a solid or a powder?

MR. SPROULE: I believe as it comes out it is in powder form.

COMMISSIONER GAINER: It would probably be dried a bit, and transported as that?

MR. SPROULE: Yes. As I understand it, it is not inflammable, nor does it burn as a powder, but it does burn with very little priming from liquid hydrocarbons. In other words, it is just to the point where it does not burn too well by itself, but with the addition of a slight amount of liquid hydrocarbons it will burn satisfactorily, and I rather suspect if you want to get more information on it you could get it from Calgary Power who have done a certain amount of experimental work in regard to it.

COMMISSIONER GAINER: They have done work using coke and solids in powdered form?

MR. SPROULE: Yes, I believe they have experimented on this problem.

COMMISSIONER GAINER: It would be similar, so far as you know, to the process used in connection with powdered coal?

MR. SPROULE: Yes, that is correct.

COMMISSIONER GAINER: And it would be



transported not in a liquid, or pipe line, form, or tank car form?

MR. SPROULE: Yes, or used in place working on the supposition that you would not necessarily even have to transport it. Normally, you do not transport a cheap source of energy of that sort. You transport it in hydro form, and use it in place. It would be a great advantage in making use of a product that would otherwise be a waste product. It would obviously reduce the per barrel cost of oil in competition with other sources. This may be a little aside -- I guess it is at that -- but at the present time western Canadian fluid hydrocarbons are high gravity, and you may have heard that of the 300,000 barrels per day that constitute the Montreal market, even if western Canadian crude were to move to Montreal, there would still be about 50,000 barrels a day of heavy fuel oil that we cannot supply because we do not have that type of fuel. Those 50,000 barrels a day could very easily be mixed, if we have it, in terms of the McMurray oil -- it could be added to the stream and be transported with no change in the pumping or transportation facilities. It is an aspect of the situation, incidentally, that the Borden Commission considered, although I am not sure that it came out to any extent in the results, but it was pointed out to them.

COMMISSIONER GAINER: This would not be



mixed; it would be batched with the existing ---

MR. SPROULE: No, sir, it could be mixed.

COMMISSIONER GAINER: And then separated at the other end?

MR. SPROULE: To some extent, yes.

COMMISSIONER GAINER: Oil extracted from the oil sands -- would this be the whole product, or would there be by-products left?

MR. SPROULE: Other by-products?

COMMISSIONER GAINER: Yes, in situ.

MR. SPROULE: I am not a refinery man. It would depend on the refiners as to the extent the McMurray oil is refined before it went into the pipe line. It may even be that aromatics might be taken out. Well, that is a late phase, but I believe some aromatics would come out with the heavy fuel, but what else is taken out I do not know. But, I do know when you mix these fuels they are a lot easier to move. When you come to batching you would have butane and propane which would become a nuisance, but you can run it through and pick it off at any given point. It has such a high evaporation point that all you have to do is to reduce the pressure at a point and your propane-butane comes off at any station along the way with no drop in throughput. I think it costs less than a cent. I have been an adviser to the Borden Commission for an eighteen months' period, and I brought the subject up because I was acquainted with



it, and I think that subject came up during the hearings.

COMMISSIONER GAINER: The suggestion is that sending liquefied petroleum gases, generally, through the ordinary pipe lines may be a feasible proposition?

MR. SPROULE: Yes, it could be.

COMMISSIONER GAINER: The other point is when you are speaking of the 50,000 barrels a day of the heavy fuel oils in the Montreal market you think the demand would still be there even though western Canadian crude was filling the rest of the requirements?

MR. SPROULE: That is a market that would still be there for Venezuela even if western Canadian crude got into the Montreal market.

COMMISSIONER GAINER: It would fill or balance the other requirements?

MR. SPROULE: Yes.

COMMISSIONER GAINER: Would it be true to say that the medium crude from southeastern Saskatchewan, and the heavier ones from eastern Alberta, some of which are already moving east and southeast -- are they not a difficulty marketwise?

MR. SPROULE: We would not want to touch those. They have already a home. For example, the Fosterton area crudes already have a home in the middle west, and they are being marketed, and it would not be to the advantage of Canada to interfere with that market.



COMMISSIONER GAINER: What I am asking really is -- I may be incorrect here, but I was under the impression, and I have been for some time, that there is some little difficulty in marketing heavier products?

MR. SPROULE: Yes, there is in the Buffalo Coulee-Coalville area in southwestern Saskatchewan. There is a substantial reserve for heavy crude that is not now being produced to capacity.

THE CHAIRMAN: What about Lloydminster?

MR. SPROULE: And Lloydminster.

THE CHAIRMAN: I beg your pardon?

MR. SPROULE: Lloydminster is being produced to capacity, but in the overall picture it is not a substantial enough production to do very much. The Husky and other refineries, I believe, are handling it. There is no proration of the Lloydminster area crude. They are producing it as fast as they can, so that is not a problem to the oil industry, and they have refineries to handle it.

COMMISSIONER GAINER: But it might well be in this other area you have mentioned, but this might be a temporary situation?

MR. SPROULE: It might be. I do not know for sure the relationships between reserves and current throughput, but I doubt very much if the present available surplus of heavy crudes in Saskatchewan could handle the situation, anyway.



COMMISSIONER GAINER: That is really what I wanted to ask you.

MR. SPROULE: They could add to it.

COMMISSIONER GAINER: Do you feel rather more optimistic for the market outlook for heavier crudes ---

MR. SPROULE: Yes.

COMMISSIONER GAINER: --- than you do for the oil picture across the board?

MR. SPROULE: Yes, I would only in part because of the possible eastern market, but also because of the market for marine fuels on the west coast. I believe it has been established that the west coast market is a relatively small gasoline market, but is an important marine fuel and diesel fuel market with particular reference to marine fuels and diesel fuels used in the lumbering industry, and so on. If the Trans-Mountain Pipe Line were put to full capacity then you would have a terrific over-supply of gasoline and the lighter products. I believe at the present time the heavier fuels do move into that general area -- the Puget Sound area -- from California to supply that market, which is a market which might otherwise be supplied from Canadian sources.



THE CHAIRMAN: If we had heavy fuel oil.

DR. SPROULE: If it were available.

COMMISSIONER GAINER: You would feel this way, having in mind the higher costs of moving it.

DR. SPROULE: I am sorry, sir, I am not sure - -

COMMISSIONER GAINER: You would feel rather more optimistic about the outlook for the heavier product than for the light, having in mind the costs of moving the heavier product.

DR. SPROULE: Yes, to a point. Economically, you just have to pass the critical point before it will move, and all I can say is that the availability of a substantial source of heavy crude could open a market for it that is capable of growing.

I think I had a fourth point there, which favours the McMurray route and that is that the oil and gas industry which might be helped - no, that was in connection with another line, but it is a point in passing, that the oil and gas industry which might be helped more on the plains than the McMurray route does not need the transportation as the mining industry does; the mining industry is the one that needs it and the mining industry would be the one that would be helped on the route which parallels the Pre-Cambrian Shield, for the metallic minerals.



These are the only notes I made on the subject. If there are any questions, I would be glad to answer them.

THE CHAIRMAN: Have you had much experience of water transportation in the north, Dr. Sproule?

DR. SPROULE: Most of my experience in water transportation has been with a canoe and a paddle. I don't regard myself as an expert on water transportation, no.

THE CHAIRMAN: I don't think we have any further questions.

Thank you very much for coming here this morning and giving us these opinions.

We will adjourn now, and we hope that we will be able to resume on Monday morning, but we won't know until this afternoon.

--- Adjournment.

ROYAL COMMISSION

ON

GREAT SLAVE LAKE RAILWAY

HEARINGS

HELD AT

EDMONTON

Alberta

VOLUME No. 25

DATE:

February 18, 1960

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3 ROYAL COMMISSION ON
4 THE GREAT SLAVE LAKE RAILWAY
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8 Hearings of the Royal Commission
9 on the Great Slave Lake Railway
10 held at Edmonton, Alberta, at
11 the Court House, at 3.00 p.m.,
12 February 18th, 1960.
13
14

15 PRESENT:

16 MR. M. E. MANNING Chairman
17 MR. WALTER D. GAINER Member
18 MR. JOHN ANDERSON-THOMSON Member
19

20
21 MR. FRANCIS M. FEEHAN Counsel
22 MR. A. PATERSON Secretary
23
24
25
26
27
28
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30



1
2 THE CHAIRMAN: Mr. Fouks, I think that
3 you have something to say about the supplementary
4 material that has been filed by yourself on behalf of
5 the Province of British Columbia?

6 MR. FOUKS: Mr. Chairman, it was quite a
7 problem as to how to present that on the brief itself.
8 I have a few comments to make. I would like, first,
9 to express the appreciation of the British Columbia
10 Government to all those concerned in allowing us to
11 present this rebuttal brief at this time, recognizing
12 that it has given the Commission extra sittings. We
13 only hope, as we know the Edmonton Chamber of Commerce
14 and all the other groups that tendered briefs have,
15 that we have been of assistance in bringing as much
16 information as possible to your attention so that in
17 your deliberations, whatever recommendations come
18 forth, they come with as much information as could be
19 made available.

20 I would like, Mr. Chairman and gentlemen, to
21 ask the Commission if they would accept the rebuttal
22 brief as read as it has been in the hands of the
23 Commission now for over one month. I would like only
24 to read page 21, and read the conclusions themselves,
25 for a moment or two, and then make one or two short
26 comments. On page 21 of our rebuttal brief, British
27 Columbia's position is as follows:

28 "Careful investigation and analysis of the
29 facts and information available on questions
30 raised during the proceedings before the
Commission lead to the following conclusions:



- (1) The West Route for the proposed railway will result in substantial reductions in the cost of moving goods into and out of the mining districts of the Northwest Territories.
- (2) The West Route will serve and benefit more people to greater advantage than will the route on the east side of Northern Alberta.
- (3) The West Route will bring developments of a permanent nature to all facets of the presently burgeoning lumber industry in northwestern Alberta.
- (4) The West Route provides the best possible means for extending direct rail service to the most promising mining areas of the Canadian Shield should such extension ever become desirable."

Mr. Chairman and gentlemen, I would like to make one or two short comments, if I may, which are British Columbia's position, and the conclusions which we would like to bring to your attention, over and above the facts and the figures and the differences of opinion that have been presented during the many days of hearings.

While this is not within the terms of reference, we do urge that this Commission strongly recommend that, regardless of which route the railway may take -- and while we, of course, tender as you well know the western route -- we urge you recommend this railroad be built as quickly as possible for the benefit of Canada and the Northwest Territories, and in particular for the benefit



1 of the people now in the areas to which this railway
2 will give service.
3

4 It is noteworthy that within the last month,
5 in Ottawa, the Northwest Territories Council passed a
6 resolution, without designating the route, bringing to
7 the attention of the public and Parliament that it is
8 most urgent this railroad be built in the cheapest and
9 quickest possible way.

10 Another conclusion or opinion or impression
11 that I would like to bring to the attention of the
12 Commission today is this: I, personally, had the privi-
13 lege recently to sit in at a meeting which discussed
14 cost studies of railway transportation. It is of no
15 consequence what the discussions were in exactitude,
16 because most of the information will be available as the
17 Royal Commission on Transportation follows. However,
18 it was a striking thing to myself, sitting there, a
19 person who actually has had very little experience with
20 railroads, and as to cost studies in particular, but
21 it was noticeable that here, at a meeting discussing
22 cost studies, more than once the question of the abandon-
23 ment of railways and lines was brought up. I heard it
24 not only within this discussion, but also at the hotel,
25 with C.N.R. and C.P.R. railroad people, and on more than
26 one occasion the question of abandonment arose.

27 Gentlemen, on behalf of the British Columbia
28 Government I urge you today that in considering your
29 final recommendations to Parliament that you keep in
30 mind this question of abandonment, so that ten or



1
2 twenty years hence that the question of this particular
3 line does not come up -- as to whether it should be
4 abandoned or not, because of railway costs.

5 It was also very noteworthy-- and again these
6 were my impressions -- that whenever the question of
7 abandonment arose, it arose because there was no diver-
8 sification on those railway lines where there were
9 people of any consequence, and where there was diver-
10 sification of industry, agriculture, lumber, mining,
11 the question of abandonment did not arise. However,
12 when it was a one-party line, built ten, twenty or thirty
13 years ago, the question seemed to come to the fore,
14 "Will this become a question of another cost study?
15 Is there a question of abandoning railway lines?" I
16 urge you gentlemen, in your recommendations to Parliament,
17 to keep this in mind, that ten or twenty years from now,
18 whenever the question may arise again -- that a Royal
19 Commission on Transportation arises every five or ten
20 years -- that this railway does not then become a ques-
21 tion or a study of, "Should we abandon it?" because the
22 one-party line -- and, again, if it goes east it is
23 British Columbia's position it becomes a one-party line,
24 and if it had worked itself out, the question of
25 abandonment would arise.

26 In British Columbia's position, gentlemen, the
27 most important -- aside from the facts and figures which
28 are essential -- thing is the question of just plain
29 people. We have bandied this around in these hearings,
30 and you gentlemen know far more about the people of this
country, in this area, than I do. You gentlemen were



1 in the Peace River and Yellowknife districts attending
2 sessions I never attended, and you heard the people of
3 those areas bring to your attention the importance to
4 them -- the reasons why they went there -- and the
5 importance of the country was dependent upon the railroad
6 coming some day.

7
8 I again, on behalf of the British Columbia
9 Government, urge you to consider this as the focal point
10 in your thinking. Relate it, if you wish, to the
11 question of abandonment, or to the question of the North-
12 west Territories, but keep it foremost in your minds
13 that, firstly, there are people there now. Obviously,
14 the population will grow with or without a railway.
15 Unlike the east, the west will grow; Canada grows to
16 the west.

17 It is also noteworthy that when you discuss
18 this question of people you bring up the question of
19 people and competitive rates so that a country and an
20 area can grow.

21 I would like to refer you for a moment or two
22 to the brief submitted this week by the Lethbridge Chamber
23 of Commerce who bring this to the attention of the Royal
24 Commission on Transportation, and I read from page 4
25 of the brief presented by them:

26 "We in Southern Alberta suffer a disadvantage
27 in the establishment of industry because of these
28 facts, but especially because of the fact that
29 only one railroad serves the area. We suggest
30 that a detailed economic study be made of the



1 feasibility of a second railway. We ask the
2 Commission to take cognizance of this request
3 and ask them to note we are already suffering
4 under severe disability vis-a-vis one railway,
5 and we should be relieved of the burden of any
6 further inequities."

7
8 It seems to me most inequitable, most unfair,
9 to hear before the Parliament of Canada a request for
10 a second railway because of lack of competition when
11 here we are faced with people in close proximity without
12 a railway and who need one to grow. This can only
13 apply to the western people at the moment, and on the face
14 of the facts and figures presented to this Royal Commis-
15 sion this will only be the case ten, twenty or thirty
16 years from now. It would seem that if there is any
17 inequity or inequality, it lies in the fact that those
18 people now resident on the western route going into
19 the Northwest Territories are without any competitive
20 transportation, without any railroad, to allow them to
21 grow to the extent which they will. Thank you, gentle-
22 men.

23 THE CHAIRMAN: Mr. Fouks, we are very glad to
24 take your brief as having been read. I think we should
25 have a copy of it marked as an exhibit.

26 ---EXHIBIT NO. 64: Brief presented by Province of
27 British Columbia (Reply to
28 questions raised in proceedings.)

29 MR. FOUKS: If there are any questions as a
30 result of the rebuttal brief, Mr. Guest and myself are



1 here to help you.

2
3 THE CHAIRMAN: There are one or two questions
4 I would like to ask Mr. Guest, if he could answer off-
5 hand, concerning the lumber industry. I think the
6 evidence before us is that 50 million feet per year is
7 about what it is hoped would come out of the north if
8 this railway is built, either the east route or the
9 west route. Can you tell us what the annual cut is
10 for British Columbia, Mr. Guest?

11 MR. GUEST: Mr. Chairman, I am unable to tell
12 you at the moment what the annual allowable cut is for
13 the Province of British Columbia, but we cut approximately
14 five billion fbm.

15 THE CHAIRMAN: Five thousand million board
16 feet?

17 MR. GUEST: Yes, of lumber per annum. In
18 the area which in our first brief we described as con-
19 tiguous with the northern extension of the P.G.E., and
20 which could be compared relatively with both western and
21 eastern northern Alberta, the annual allowable cut is
22 95 million cubic feet.

23 THE CHAIRMAN: You say the annual cut is
24 five billion, and now you are going to the P.G.E. and
25 referring to the annual allowable cut?

26 MR. GUEST: Yes, the annual allowable cut in
27 the area which we delineated in our original submission
28 in December, 1959, on page 31 of the original submission
29 in a chapter designated "Forest Appraisal", which desig-
30 nates three areas in British Columbia and Alberta -- three
areas which were compared. The annual allowable cut for



1 the area in British Columbia, which includes both sawn
2 timber and pulpwood, is 95 million cubic feet.

3
4 THE CHAIRMAN: How much of that is sawn timber?

5 MR. GUEST: Forty-seven million board feet
6 -- approximately half.

7 THE CHAIRMAN: How many board feet is that?

8 MR. GUEST: Multiply it by six -- that is,
9 570 million.

10 THE CHAIRMAN: Sawn timber is 282 million?

11 MR. GUEST: Yes, that is right.

12 THE CHAIRMAN: Now, that is in the area con-
13 tiguous with the extension of the P.G.E.?

14 MR. GUEST: This is in the area which we have
15 designated on a map facing page 9, and it designates the
16 area in British Columbia, and in the chapter on "Forest
17 Appraisal" the area is delineated as bounded on the
18 north by 57 degrees latitude and by 55 degrees latitude
19 on the south; the western boundary is 120 degrees
20 longitude and on the east by the boundaries of Alberta
21 and British Columbia. This area contains ten million
22 acres of which eighty per cent is forest.

23 THE CHAIRMAN: And that is all now available,
24 or can be serviced by the extension of the P.G.E.?

25 MR. GUEST: Yes, it will be -- or, the
26 Northern Alberta Railway -- both P.G.E. and the Northern
27 Alberta Railway.

28 THE CHAIRMAN: That is 282 million is the
29 annual allowable cut?

30 MR. GUEST: Yes, of sawn timber.



1 THE CHAIRMAN: How much of that is being cut?

2 MR. GUEST: I am unable to give you the figures
3 today, Mr. Chairman, but I shall see that the latest
4 figures will be in your hands next week. I will get
5 that as soon as I get back to Victoria, from the British
6 Columbia Forest Service.

7 THE CHAIRMAN: You don't know what they were
8 last year?

9 MR. GUEST: No, I haven't got the actual cut
10 last year.

11 THE CHAIRMAN: You can conveniently let us
12 have those?

13 MR. GUEST: Yes, I will get them. You want
14 a comparison with the next area in Alberta?

15 THE CHAIRMAN: It is in your original brief?.

16 MR. GUEST: Yes, on page 33. That gives
17 33.7 million cubic feet of sawn timber. However, of
18 course, a much larger area, because the timber is more
19 dense as you go west -- the density of the timber
20 increases -- and as you go east, it declines.

21 There is one point, Mr. Chairman, in assessing
22 the two areas: the area which we have designated as
23 serviced by the northern extension of the Pacific Great
24 Eastern Railway will be in approximately the same com-
25 petitive position with the markets as an area north of
26 Grimshaw because of the influence of arbitraries to
27 destinations in Eastern Canada and the prairie provinces
28 or the United States. The rate at Dawson Creek is the
29 same as Grimshaw and Prince George, and anything between
30



1 Prince George and Dawson Creek has to pay an extra rate
2 based on a certain series of arbitraries, and we assume
3 that lumber hauled from north of Grimshaw will be kept
4 in the same competitive relationship, and would appear
5 to be a practical rate-making approach.
6

7 THE CHAIRMAN: You are assuming an arbitrary?

8 MR. GUEST: Yes. The P.G.E. would be a
9 competitive source and our lumber rates have blanket
10 originating zones in both Alberta and British Columbia
11 to keep them fairly competitive. In spite of the
12 additional cost in both the area north of Prince George
13 and the area south of Prince George -- that is, in the
14 Cariboo area between Williams Lake and Prince George,
15 which is a very heavy lumber producing area -- the
16 increase of lumber shipments has been very, very notice-
17 able. While total traffic on the railways has in-
18 creased very little in 1959 over 1958, lumber production
19 in this area shot up. The P.G.E. loaded 55,000 cars
20 last year, and about 65 per cent of those were lumber.
21 In 1959 Pacific Great Eastern Railway turned 32,000
22 cars over to the Canadian National and Canadian Pacific,
23 and of those 32,000 cars I think 90 per cent of them
24 were cars of lumber.

25 THE CHAIRMAN: And that is this large actual
26 cut, the exact figures of which you will let us have?

27 MR. GUEST: No; I am trying to point out that
28 in an area where the rates are higher than the rates on
29 the main lines on the Canadian National or Canadian
30 Pacific, because of this additional arbitrary ---



1 THE CHAIRMAN: How much is that arbitrary?

2
3 MR. GUEST: It varies, depending on the
4 distance from Prince George or Vancouver. It can
5 vary considerably and it varies depending on whether
6 the destination is the prairie provinces, eastern
7 Canada or the United States. The arbitrary to the
8 United States, for example, is quite small -- I just
9 don't know the exact cents in a fraction, but it is not
10 too much, but the arbitrary to the prairie provinces
11 is quite large and the arbitrary to eastern Canada
12 is somewhat smaller.

13 THE CHAIRMAN: Would you let us have those
14 details as well?

15 MR. GUEST: Very good, sir.

16 THE CHAIRMAN: You are assuming -- I take it
17 you are doing more than assuming -- you believe that it
18 would be necessary to have the same rates north of
19 Grimshaw as they are north of Prince George in order
20 that the timber along there could compete with the
21 timber from the area north of Prince George?

22 MR. GUEST: I think so. If you have blanket
23 areas of origination in British Columbia, as we do now
24 in Northern Alberta, I see no reason to vary this pattern.
25 Certainly, the railways would not want to do that.
26 They want to get all the timber out of this area they
27 can because that is very lucrative traffic, and if
28 people can make a thousand dollars moving a car of timber
29 to Toronto from Grimshaw, or north, they will get every
30 car they can, and they won't have that hampered in any
way by a rate problem. I think they will follow the



1 same pattern as they do at the present time.

2 THE CHAIRMAN: Thank you very much. That
3 concludes your submission?

4 MR. FOUKS: Yes, Mr. Chairman.

5 THE CHAIRMAN: Mr. Fouks, I think we should say
6 now that we are very grateful to you.

7 MR. FOUKS: It is a pleasure, sir.

8 THE CHAIRMAN: It has been very helpful to us,
9 and the manner in which it has been presented to us has
10 made our hearings much more pleasant than they might
11 otherwise have been.

12 Mr. Bishop, we have the brief of your clients.
13 I don't think it has formally been filed, and a copy
14 will be filed now.

15 MR. BISHOP: Mr. Chairman and members of the
16 Commission, I would like to formally present this. It
17 amounts to a summary of the submissions to the Royal
18 Commission as we see the evidence, and the main purpose
19 of this summary as we state in the summary, is to try
20 to put things in their proper perspective.

21 Mr. Chairman, you will recall that many hours
22 were often spent in discussing points which were, in fact,
23 not of major importance to the railway, and we wanted to
24 ensure that proper emphasis was given to the points we
25 feel were the more important and the most important to
26 the railway. So, I will submit this as an exhibit.

27 THE CHAIRMAN: And we will take that as having
28 been read, as we have done with Mr. Fouks' brief.

29 MR. BISHOP: Yes, sir, if you will.
30



1
2 ---EXHIBIT NO. 65: Summary submitted by City of
3 Edmonton; Edmonton and Calgary
4 Chambers of Commerce (combined).

5 THE CHAIRMAN: Is there anything you would
6 like to add to what you have said in the submission?

7 MR. BISHOP: I would merely like to remark,
8 sir, that with regard to the second submission of the
9 Province of British Columbia it will not surprise members
10 of the Commission to find that we do not agree with the
11 conclusions reached in this submission, and we do not
12 feel these conclusions are supported by the facts which
13 you will find in the evidence. However, beyond that
14 point, we obviously do not want to start a new series
15 of hearings to discuss whether we are right or Mr.
16 Fouks and his associates are right. Thank you.

17 THE CHAIRMAN: I wish to express our apprecia-
18 tion to you and your clients, the same as I did to Mr.
19 Fouks and his clients, for the help you have been to us.

20 MR. BISHOP: Thank you.

21 THE CHAIRMAN: Are there any other submis-
22 sions anyone would like to submit?

23 Dr. Odynsky, you have been good enough to come
24 down and I understand you have a report in connection
25 with research work in connection with the soils of
26 northern Alberta?

27 MR. ODYNSKY: It was submitted some time ago,
28 sir -- the report from my group. It is a question now of
29 whether you wish a review of that, or is there another
30 report that you require? The report was submitted.

THE CHAIRMAN: Yes. If you could let us have



1 a copy to be filed now as an exhibit, we would be very
2 glad to have it.
3

4 ---EXHIBIT NO. 66: Report: Research Council of
5 Alberta (exploratory soil survey
6 1956-1959).
7

8 THE CHAIRMAN: Could you give us an outline
9 of your conclusions with regard to soil conditions in
10 the northeasterly part of Alberta and the northwestern
11 part of Alberta?
12

13 MR. ODYNSKY: As far as the northeasterly
14 portion of Alberta is concerned, it is strictly con-
15 jecture since we have not had an opportunity of look-
16 ing over that portion of the province. Our plans are
17 such that we anticipate the opportunity of examining
18 that portion of the province, but as indicated in a
19 copy submitted to you, sir, there is a portion involving
20 the area north of McMurray and involving the area
21 adjacent to Lake Athabasca that we have not had the
22 opportunity of examining.
23

24 The northwestern portion, between latitudes
25 59 and 60 has not been examined either.
26

27 The rest of the province, south of 59 and
28 west of the 5th meridian has been roughly examined,
29 exploratory-wise. The latest report that we have that
30 is being submitted for publication is a preliminary
report involving an area around Fort Vermilion, Hay
Lake, and this area stretching as far east as Red River
Post.

THE CHAIRMAN: What are your conclusions about



1 the nature of the soil around the area in the northern
2 part of Alberta and west of the 5th meridian?

3 MR. ODYNSKY: As we outlined, there are por-
4 tions that definitely merit consideration for agri-
5 cultural improvement: for example, perhaps if that
6 report is available for your purposes, references can
7 be made to the areas involved in the immediate vicinity
8 of Fort Vermilion. There is an estimated amount there
9 of what we call potential arable land in the immediate
10 vicinity of Vermilion of roughly one million acres.
11 Our opinion that has been submitted for your considera-
12 tion, in reply to the request, is based largely on the
13 work that we have been doing during the last five years
14 that involves a very preliminary attempt, or an examina-
15 tion, made at intervals of approximately ten miles to
16 obtain a rapid inventory of the possibilities in the
17 relatively inaccessible portions. To that end, we have
18 been able to look over the area on the east side, a
19 complete strip stretching from Lac La Biche to McMurray,
20 and on the west side from a settled area adjacent to
21 North Star, Manning, involving inaccessible portions to
22 the east side, and extending north; our inspection to date
23 has covered that portion extending north through to the
24 Cariboo Mountains, and on the basis of that information,
25 on the outlined portions, our present estimate of the
26 total of what we call potential arable land is roughly
27 seven million acres, where the proportion (sic) of it
28 is on the west side, or west of the 5th meridian.

29 THE CHAIRMAN: Have you made any investigation
30 of soil conditions east of the 5th meridian and to the



1 north of McMurrary?

2 MR. ODYNSKY: Not north of McMurray; not yet.

3 THE CHAIRMAN: Nothing has been done?

4 MR. ODYNSKY: Not that I know of. There
5 has been work done by Dr. Leehy, and I brought his report
6 along in case reference was made to it. Dr. Leehy of
7 Ottawa undertook a somewhat similar survey, exploratory,
8 involving the lowlands of the Slave River. That in-
9 volves the area around Fort Smith and Fort Resolution.
10 It involves, essentially, the valley area extending
11 adjacent to the Slave River, and he calls that the
12 Slave River lowland in which he describes these brown
13 wooded soils.

14 COMMISSIONER GAINER: Do you remember, off-
15 hand, whether it was something like a million potential
16 arable -- do you remember that figure offhand?

17 MR. ODYNSKY: Well, it might be desirable to
18 bear in mind what this arable land consists of.

19 COMMISSIONER GAINER: Could you compare it
20 with your own classification, just roughly?

21 MR. ODYNSKY: Roughly, much the same as far
22 as Leehy's report is concerned, as given in table 4,
23 page 36, of the report that was published in 1957. He
24 has listed the different soil types, basing the
25 information on considerations somewhat similar to ours
26 that apply to our exploratory work. He has indicated
27 "Class 1: arable". Now, the first group is 12,000;
28 the other group is 384, in which he indicates there are
29 no limiting factors. There still is a possibility
30



1 since, as far as our interpretation of arable land is
2 concerned, our interpretation of that is land that is
3 capable of agricultural production. The fact is that
4 some of the area here will still have features that are
5 of a nature such as heavy cover. Much of this area
6 here, much of the land here, could perhaps not be used
7 at the present time, or until such time as clearing of
8 heavy cover may be warranted. But, on the basis of
9 the land that he has as Class 1, Arable, in which he
10 has indicated there are no limiting factors, a total
11 of 397,300 acres involving 18.3 per cent of the total
12 area. The total area as indicated here as 2,179,000
13 acres -- 18 per cent of that was 397,300 acres, and he
14 calls that arable with no significant limiting factors.
15 His "Class 2: arable" with some or moderate limiting
16 factors -- now, those limiting factors will involve in
17 certain areas, drainage. For example, much of the
18 report, at the beginning of the report it is estimated
19 that perhaps 50 per cent of the area, the entire area,
20 consists of low-lying meadowy and boggy areas. He
21 has got the first one imperfectly drained. The limiting
22 factors there are drainage, the coal soils have depres-
23 sions in topography and should be drained, and should be
24 drained to permit utilization. In both cases he is
25 thinking and considering vegetable crops -- potatoes,
26 forage, hay crops -- a sort of sustaining agriculture.
27 He has indicated for one group of soils a depression of
28 topography; another one, lightness and droughted, and
29 another one in this Class 2 consists of a group of soils,
30



1 and the first one is drainage, droughted ones, and the
2 third one is permafrost soils. Permafrost occurs,
3 apparently, at depths -- permanently frozen conditions
4 occur at depths from 18 or deeper, and he has included
5 that, and the melting of that permafrost can take place
6 on clearing, and generally improve the land. Another
7 group in that is a group of soil that is also poorly
8 drained. Those are the limiting factors. He still
9 calls it "Class 2" with an indication of these limiting
10 factors. That second class arable comprises 54.3
11 per cent of the area, and those are the two groups that
12 he has added up and indicated in his summation of the
13 report by saying that 72.6 per cent, or 73 per cent, of
14 the area might be suitable for agricultural development.

15 THE CHAIRMAN: That is on the eastern side?

16 MR. ODYNSKY: It will be roughly north of
17 our northeasterly portion, striking north of Smith
18 towards Resolution, and the effort there has been to
19 determine, I gather, the suitability of a sustaining
20 agriculture such as vegetable production -- potatoes
21 and forage production. There is no indication of an
22 agriculture such as we have in mind in rating our soils
23 here. We are still thinking on the grain factors as
24 far as our rating is based today. We have encountered
25 permafrost in last year's effort in the Cariboo Mountains.
26 Well, of course, plus the elevation, plus the fact you
27 have got frost, we didn't think that merited consideration
28 as far as last year's effort was concerned. It may be
29 that such conditions would occur, but we would not like
30



1 to say anything about it as far as the area in Alberta
2 is concerned. This report involves the area north
3 of Alberta in the Northwest Territories, involving what
4 is called the Hay River lowland.
5

6 THE CHAIRMAN: When you speak of things that
7 can be grown there, I take it it is not suitable for
8 grain growing?

9 MR. ODYNSKY: Well, I would not like to say
10 that.

11 THE CHAIRMAN: Do you think it would be satis-
12 factory for vegetables -- 73 per cent of it is satis-
13 factory for vegetables and for pasture for livestock?

14 MR. ODYNSKY: Fifty-four per cent, if you
15 are prepared to improve the drainage.

16 THE CHAIRMAN: Yes.

17 MR. ODYNSKY: Improve that, and there is a
18 possibility.

19 THE CHAIRMAN: What about the area in the
20 northeasterly part of Alberta? You say it is more
21 or less tributary to Lake Athabasca, Lake Clair and
22 the Athabasca River; do you know anything about that?

23 MR. ODYNSKY: I don't know. We have some
24 suspicions, but as far as committing ourselves -- we
25 know very well what the area is as far as McMurray, but
26 beyond there the area that is described here by Leehy
27 does come up, and seems to indicate -- it comes to our
28 border and, presumably, we may have an extension of this
29 area around the Slave, and perhaps coming down towards
30 Athabasca. There has been very little consideration



1 to date with respect to draining low-lying land.

2
3 THE CHAIRMAN: You say you have some suspi-
4 cions about the land north of McMurray?

5 MR. ODYNSKY: Well, there is a suspicion
6 that perhaps soils that might be rather similar may be
7 coming along and could be typical of the deltaic area
8 adjacent to Athabasca, but the fact is, too, we feel
9 at the present time that when an area that has, say,
10 60 or 70 per cent -- we try to group the areas and
11 outline them -- and if you have, say, 60 or 70 per cent
12 of bog and low-lying land, we are not in a position at
13 the present time to recommend or suggest that that is
14 arable. If the adjacent land is reasonable, and we
15 feel it is suitable, and you have got a pretty high pro-
16 portion of boggy lands, we would perhaps be tempted to
17 map them up as doubtful.

18 THE CHAIRMAN: You say it is doubtful land
19 because there is bog there?

20 MR. ODYNSKY: Bog.

21 THE CHAIRMAN: The nature of the soil?

22 MR. ODYNSKY: No; doubtful whether it merits
23 consideration for development at the present time. Our
24 programme, sir, was launched with a view to trying to
25 predict on the basis of the information that we are
26 getting the areas that might conceivably be opened or
27 considered for opening for development in a period of,
28 say, fifty years. The purpose of that was that the
29 Department of Forests was anxious to launch a forest
30 management programme. So, as I say, we have put that



1 group of doubtful lands, since under the conditions that
2 we are considering at the present time, an area that has
3 that much low-lying land -- that is, boggy -- and is
4 predominantly 60 or more per cent, we are presently
5 leaving as doubtful, with the idea that if conditions
6 merit development there may be a possibility but, on
7 the other hand, on the figures we have got to date, it
8 will include areas that have a smaller percentage of bog
9 generally, which perhaps lend themselves a little bit
10 better in that regard.

11 COMMISSIONER GAINER: To summarize your
12 criterion, would you say that in your Class -- did you
13 call it "arable"? What was the term you used for your
14 surveys in the west for your arable land? Was it
15 "arable"?
16

17 MR. ODYNSKY: Yes.

18 COMMISSIONER GAINER: The limitations that
19 you have mentioned Leehy has imposed on his Class 2,
20 would you say those were roughly equivalent to the same
21 limitations that you would have excluded from your
22 Class 1, or would it appear that you might have given
23 a tougher classification -- or, is that hard to say?

24 MR. ODYNSKY: I don't think so. It is hard
25 to say. Dr. Leehy has already indicated it is very
26 hard. Also, Dr. Leehy's effort was based largely,
27 first of all, on aerial photo interpretation to find out
28 landscape features, and then go in there and take a
29 look and see what may be considered as typical soil of
30 that region. He has also indicated, for example, in



1 the first group, there are no limitations, but he has
2 also indicated the limitations in the others. Perma-
3 frost is a feature we are not too familiar with here.
4 The people in the northern portions, such as Alaska,
5 somehow have learned to handle that situation.
6 Apparently, the permafrost is melting; on clearing the
7 thing goes down. It is a cool sort of soil for a lot
8 of purposes. Perhaps pasturewise and others, perfectly
9 good when the only feature is that of melting frost
10 and the tendency of pitting. But, Leehy has already
11 indicated the main limitations, whereas we have also
12 done that. We have indicated limitations too, but
13 limitations with respect to drainage, for example, if
14 an area, as a general area -- half of that roughly con-
15 sists of low-lying land. Well, as an area, perhaps the
16 remainder is merited, and perhaps consideration should
17 be given if other features are all right -- topography,
18 soil, the fact you have got that many poorly drained --
19 meadowy and that sort of thing. These are being used
20 in conjunction with better drained soils, and we are
21 thinking more in terms as to why the considerations
22 are the same here. Leehy has indicated the limiting
23 features and we recognize the same limiting features,
24 but, as I say, if we have got something better than 60
25 or 70 per cent poorly drained, we would be tempted to
26 be calling them doubtful in character.

27
28 COMMISSIONER GAINER: There is one other point
29 you might care to comment on: neither classification
30 takes account of the chemical analysis or the soil



1 ingredients. Are you familiar enough with Leehy's
2 work to be able to say this would impose more or less
3 several limitations on agriculture aside from drainage,
4 topography and the other features, as compared with the
5 work you have done in the west?

6 MR. ODYNSKY: I don't think so. The fact is
7 that in a northern region, by and large, after a few
8 years cropping it is advisable and economical to con-
9 sider the use of a commercial fertilizer -- supplemental
10 applications of nitrogen and phosphorus are being used
11 to good advantage. Based on the analyses that Leehy
12 has included here, the soils also indicate not too high
13 a percentage of nitrogen and a rather similar percentage
14 of phosphorus. The chance is, I would say, that on
15 cultivation, as I think Leehy has pointed out, supple-
16 mental applications of fertilizer will be required.
17 Brown wood, or anything else, soils developed under
18 forest conditions are not usually high in nitrogen,
19 and soon after cultivation they will have to have
20 supplemental applications of both nitrogen and phosphorus.
21 We don't have the darker soils that we have got in the
22 western portions. In the western portions we have got
23 islands of the dark coloured that are more of the grass-
24 land type and a good deal higher in nitrogen, but these
25 areas we are examining now, and the ones that appear to
26 be of that type -- well, certainly, the ones Leehy has
27 indicated here and the ones we seem to be getting into,
28 are soils that will vary, of course. Some will have
29 a good deal more nitrogen than the others, but,
30



1 generally speaking, the experience in the north and
2 the bush country is that sooner or later you will have
3 to consider supplemental applications of commercial
4 fertilizer -- particularly phosphorus -- to hasten the
5 ripening.

6
7 COMMISSIONER ANDERSON-THOMSON: Would it
8 be fair to say that as far as Northern Saskatchewan and
9 Northern Alberta are concerned, if there was any sizeable
10 area with no farmers or settlers -- would it be that
11 the chances are that that particular area is not too
12 suitable for farming, otherwise the farmers would have
13 been there?

14 MR. ODYNSKY: You are speaking about the
15 Northeast Territories?

16 COMMISSIONER ANDERSON-THOMSON: Any part of
17 Canada for that matter, but any part of Northern
18 Saskatchewan or Alberta; if it was at all suitable for
19 farming, wouldn't we expect them to be there?

20 MR. ODYNSKY: Well, that is the experience in
21 Alberta, sir. The darkest and best soils are pretty
22 well taken up right now.

23 COMMISSIONER ANDERSON-THOMSON: And if there
24 were good soils along the Athabasca, as there are along
25 the Peace, there would be somebody in there farming long
26 before the soil services were there to tell them
27 whether it was good or bad?

28 MR. ODYNSKY: Well, much of the first settle-
29 ment was along the river valleys. Perhaps the first
30 wheat grown in Alberta, supposedly was at Fort Vermilion,



1 wasn't it? So that early agriculture did pick the
2 darker coloured valley or adjacent to the river valleys.
3

4 COMMISSIONER ANDERSON-THOMSON: Do you think
5 there is any chance that during the dry drought-stricken
6 20's that the farmers missed any of these good sections
7 any place?

8 MR. ODYNSKY: As far as some of those sections
9 are concerned, there are two things to consider: the
10 settlement picture, first of all, as you go into the
11 wooded areas, the first requirement, if you like, is
12 the absence of cover, so they are looking at clear open
13 air. You may find a natural sort of a prairie or
14 parkland area or, alternatively, the grey areas or
15 brown areas in which you have had fire removing the
16 cover. There are some of these darker soil areas,
17 perhaps farther removed, but the relatively accessible
18 areas have been pretty well taken up. The last areas
19 of the darker soils were a section south of Aluminum;
20 that was pretty hard to get into until the construction
21 of the highway. What the situation is at the area you
22 refer to, up the Slave lowland, I don't know. However,
23 as far as Alberta is concerned, that is correct: there are
24 still some desirable locations and desirable and better
25 soils still available around Vermilion.

26 THE CHAIRMAN: Thank you very much.

27 Are there any other submissions?

28 Well, we have a few documents that should be
29 filed.

30 ---EXHIBIT NO. 67: Northern Alberta Railways.



1
2 ---EXHIBIT NO. 68: B. J. Prest.

3 ---EXHIBIT NO. 69: Jean LeMouel.

4
5 ---EXHIBITS NOS. 70 and 71: Royalite Oil Company --
6 letters dated September
7 21st, 1959 and November
8 2nd, 1959.

9 ---EXHIBIT NO. 72: United Grain Growers Limited.

10 ---EXHIBIT NO. 73: Alberta Wheat Pool (letter con-
11 taining resolution passed at
12 Annual Meeting)

13 THE CHAIRMAN: We will now adjourn.

14 ---Whereupon the hearing adjourned at 4.05 p.m.

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